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# Hydrologic Data for Urban Studies in the Fort Worth, Texas Metropolitan Area, 1976

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**U.S. GEOLOGICAL SURVEY**

**OFR/WRD 77-770**



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*Prepared in cooperation with the City of Fort Worth*



# Hydrologic Data for Urban Studies in the Fort Worth, Texas Metropolitan Area, 1976

*R. M. Slade, Jr. and J. M. Taylor*

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*Prepared in cooperation with the City of Fort Worth*

**May 1978**

UNITED STATES DEPARTMENT OF THE INTERIOR

CECIL D. ANDRUS, SECRETARY

GEOLOGICAL SURVEY

H. William Menard, Director

Reproduced by the Texas Department of Water Resources  
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Federal Building  
300 East 8th Street  
Austin, TX 78701

# CONTENTS

	Page
Introduction-----	7
Watershed features-----	10
Sycamore Creek and Sycamore Creek tributary study areas-----	10
Dry Branch and Little Fossil Creek study areas-----	12
Hydrologic instruments-----	12
Data collection and explanation-----	15
Rainfall-----	15
Runoff-----	16
Summary of data for the 1976 water year-----	18
Compilation of data-----	25
Station description and daily, monthly, and yearly discharge at stream-gaging stations, 1976 water year, Trinity River basin:	
Sycamore Creek at Interstate Highway 35-W, Fort Worth, Tex.----	26
Sycamore Creek tributary above Seminary South Shopping Center, Fort Worth, Tex.-----	27
Sycamore Creek tributary at Interstate Highway 35-W, Fort Worth, Tex.-----	28
Dry Branch at Fain Street, Fort Worth, Tex.-----	29
Little Fossil Creek at Mesquite Street, Fort Worth, Tex.-----	30
Maximum discharge at crest-stage partial-record stations, 1976 water year-----	31
Daily and monthly rainfall summary-----	32
Storm rainfall and runoff records for selected storms at continuous-record stream-gaging stations:	
Sycamore Creek at Interstate Highway 35-W, Fort Worth, Tex.	
Storm of April 19-20, 1976-----	36
Storm of May 30-31, 1976-----	39
Storm of Sept. 19, 1976-----	42
Sycamore Creek tributary above Seminary South Shopping Center, Fort Worth, Tex.	
Storm of April 19-20, 1976-----	44
Storm of July 3, 1976-----	47
Storm of Aug. 29, 1976-----	49
Sycamore Creek tributary at Interstate Highway 35-W, Fort Worth, Tex.	
Storm of April 19-20, 1976-----	51
Storm of July 3, 1976-----	54
Storm of Aug. 29, 1976-----	56
Seminary South Shopping Center, Fort Worth, Tex.	
Storm of April 19-20, 1976-----	58
Storm of July 3, 1976-----	61
Storm of Aug. 29, 1976-----	63

# CONTENTS--Continued

	Page
Compilation of data--Continued	
Storm rainfall and runoff records for selected storms at continuous-record stream-gaging stations--Continued	
Dry Branch at Fain Street, Fort Worth, Tex.	
Storm of May 30-31, 1976-----	65
Storm of July 16, 1976-----	68
Little Fossil Creek at Mesquite Street, Fort Worth, Tex.	
Storm of May 30-31, 1976-----	70
Storm of July 16, 1976-----	73
Storm rainfall and runoff records for selected storms at crest-stage partial-record stations:	
Dry Branch at Blandin Street, Fort Worth, Tex.	
Storm of May 30-31, 1976-----	75
Storm of July 16, 1976-----	78
Little Fossil Creek at Interstate Highway 820, Fort Worth, Tex.	
Storm of May 30-31, 1976-----	80
Storm of July 16, 1976-----	83

## ILLUSTRATIONS

	Page
Figure 1. Map showing the locations of Sycamore Creek, Sycamore Creek tributary, Dry Branch, and Little Fossil Creek study areas-----	8
2. Map showing the locations of hydrologic- instrument installations in the Sycamore Creek and Sycamore Creek tributary study areas-----	11
3. Map showing the locations of hydrologic- instrument installations in the Dry Branch and Little Fossil Creek study areas-----	13





# TABLES

	Page
Table 1. Summary of monthly rainfall-runoff relationship for the 1976 water year for the Seminary South Shopping Center and associated drainage area-----	14
2. Equations used to compute weighted-mean rainfall for the area above each continuous-record stream-gaging or crest-stage partial-record station-----	17
3. Storm rainfall-runoff data at streamflow stations, 1976 water year-----	19
4. Storm rainfall-runoff data at crest-stage partial- record stations, 1976 water year-----	22
5. Peak elevations at flood-profile partial-record and continuous-record stations, 1976 water year-----	23



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HYDROLOGIC DATA FOR URBAN STUDIES IN THE  
FORT WORTH, TEXAS, METROPOLITAN AREA

1976

By

R. M. Slade, Jr. and J. M. Taylor  
U.S. Geological Survey

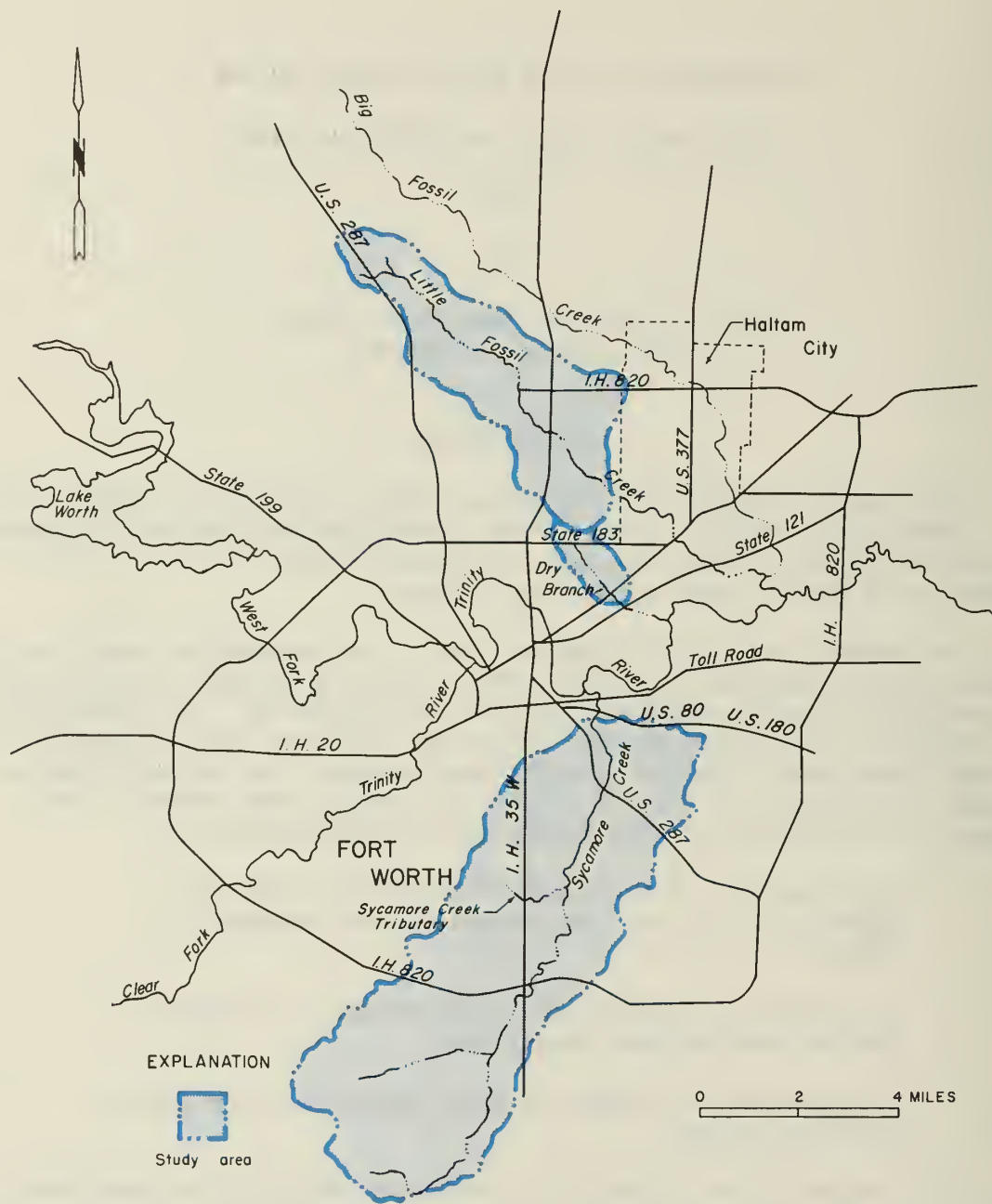
INTRODUCTION

Hydrologic investigations of urban areas in Texas were begun by the U.S. Geological Survey in 1954. These investigations are now in progress in several major metropolitan areas including Austin, Dallas, Dallas County, Fort Worth, Houston, and San Antonio.

In October 1968, the Geological Survey, in cooperation with the city of Fort Worth Department of Public Works, began a program of hydrologic investigations on several small streams in Fort Worth. The investigations are designed to evaluate factors affecting floods on small streams in the metropolitan area. Studies of additional streams, one of which drains beneath the impervious area of a shopping center, were added to the program in October 1969. The objectives of the program are:

1. To determine, on the basis of historical data and hydrologic analyses, the magnitude and frequency of floods.
2. To document and define the areal extent of floods of greater than ordinary magnitude.
3. To determine the effect of urban development on flood peaks and volume.

This report is the eighth in a series of reports to be published annually for the Fort Worth area as part of a continuing program. The report presents the basic hydrologic data collected in four study areas during the 1976 water year (October 1, 1975 to September 30, 1976). The four study areas within the metropolitan area are Sycamore Creek, Sycamore Creek tributary, Dry Branch, and Little Fossil Creek (fig. 1). The Sycamore Creek tributary study area includes the highly impervious area of the Seminary South Shopping Center (fig. 1) as a subarea.



Base from General Highway  
map of Texas

FIGURE 1.— Locations of Sycamore Creek, Sycamore Creek tributary, Dry Branch, and Little Fossil Creek study areas

To facilitate the publication and distribution of this report at the earliest feasible time, certain material contained herein does not conform to the formal publication standards of the U.S. Geological Survey.

For those readers interested in using the metric system, the English units of measurement used in this report may be converted to metric units by using the following conversion factors:

From		Multiply by	To obtain	
Unit	Abbrevia- tion		Unit	Abbrevia- tion
inch	--	25.4	millimeter	mm
foot	--	.3048	meter	m
mile	--	1.609	kilometer	km
square mile	mi <sup>2</sup>	2.590	square kilometer	km <sup>2</sup>
cubic foot per second	ft <sup>3</sup> /s	.02832	cubic meter per second	m <sup>3</sup> /s
foot per mile	ft/mi	.189	meter per kilometer	m/km
acre-foot	--	1233	cubic meter	m <sup>3</sup>
		.001233	cubic hectometer	hm <sup>3</sup>

WATERSHED FEATURES  
Sycamore Creek and Sycamore Creek Tributary Study Areas

Sycamore Creek (fig. 2) is located south and east of downtown Fort Worth in south-central Tarrant County. The headwaters originate in a rural area in the southwest section of Fort Worth. Parts of this rural area are being urbanized. The stream flows northeastwardly in an open channel and passes beneath Interstate Highway 35-W to southeast Fort Worth. The stream continues its northeasterly course through residential and light industrial sections of the near-east side of Fort Worth and on into the West Fork Trinity River. The creek decreases in altitude from approximately 840 feet above mean sea level at the headwaters to 630 feet at Interstate Highway 35-W, a distance of 8.2 miles. The creek decreases in altitude from 630 feet at Interstate Highway 35-W to 496 feet at U.S. Highway 80 and 180 (0.9 mile upstream from the West Fork Trinity River), a distance of 7.8 miles. The altitude at the mouth of Sycamore Creek is about 489 feet above mean sea level.

Sycamore Creek tributary (fig. 2) is within the Sycamore Creek drainage basin. The tributary is in the south-central section of Fort Worth. The headwaters originate approximately 1.3 miles west of Seminary South Shopping Center (fig. 2). A storm-water drainage system collects runoff from a residential-park area through street-gutter inlets upstream from Hemphill Street (fig. 2). The tributary flows easterly through a system of open-channel, pipe-arch, and box culverts. Storm water from the shopping center, two peripheral residential-commercial areas, and Interstate Highway 35-W flows into the underground drainage system.

Sycamore Creek tributary decreases in altitude from approximately 760 feet above mean sea level at the headwaters to approximately 647.7 feet at the gaging station above Seminary South Shopping Center, a distance of 1.3 miles. At the western edge of the shopping center and at the entrance of the underground pipe-arch culvert, the altitude changes from 647.7 to 643.8 feet in a distance of about 130 feet. The tributary then decreases in altitude from 643.8 feet at the entrance to 618.7 feet at the downstream side of Interstate Highway 35-W, a distance of approximately 0.7 mile.

The Seminary South Shopping Center contains many retail business establishments, large parking areas, and one high-rise building. The flat roofs of many buildings are topped with aggregate, and considerable storage of water can occur on the rooftops. The drainage system in the center is composed of gutter inlets connected to many subsurface concrete lateral pipes; each pipe feeds a main. The mains drain into a central concrete-arch culvert beneath the center.



- ▲ Continuous-record station
- △ Flood-profile partial-record station
- Recording rain gage
- 2 Number adjacent to station corresponds to those in table 5
- Drainage divide

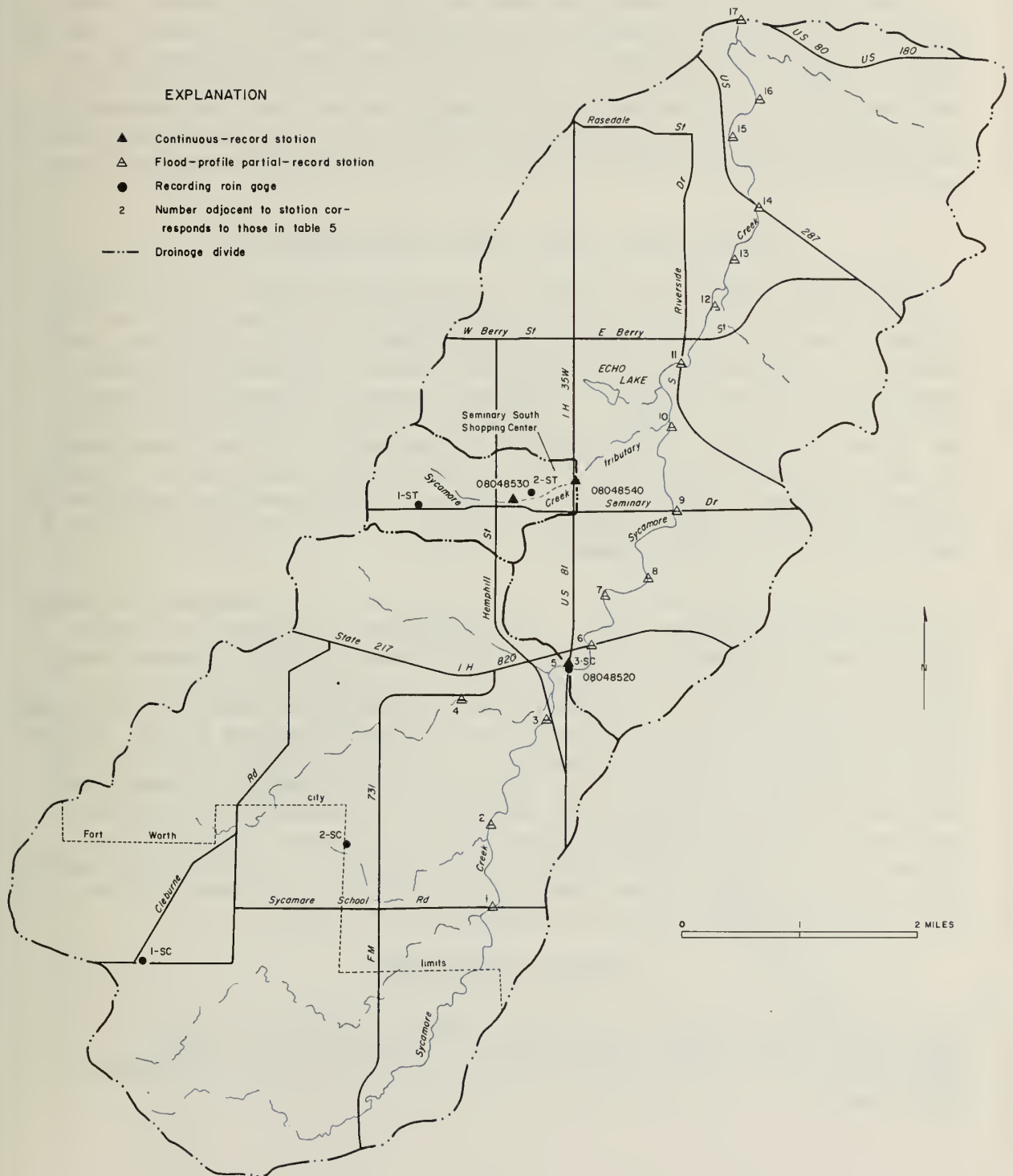


FIGURE 2.—Locotions of hydrologic-instrument instollotions in the Sycomore Creek and Sycamore Creek tributary study areas

The difference in runoff between the gaging stations above (08048530) and below (08048540) the Seminary South Shopping Center is runoff from the shopping center and residential-commercial areas north and south of the shopping center. Approximately one-third of this intervening drainage area consists of the Seminary South Shopping Center, and the remaining two-thirds consists of the residential-commercial areas. Monthly rainfall and runoff data of the shopping center and associated drainage area are presented in table 1.

### Dry Branch and Little Fossil Creek Study Areas

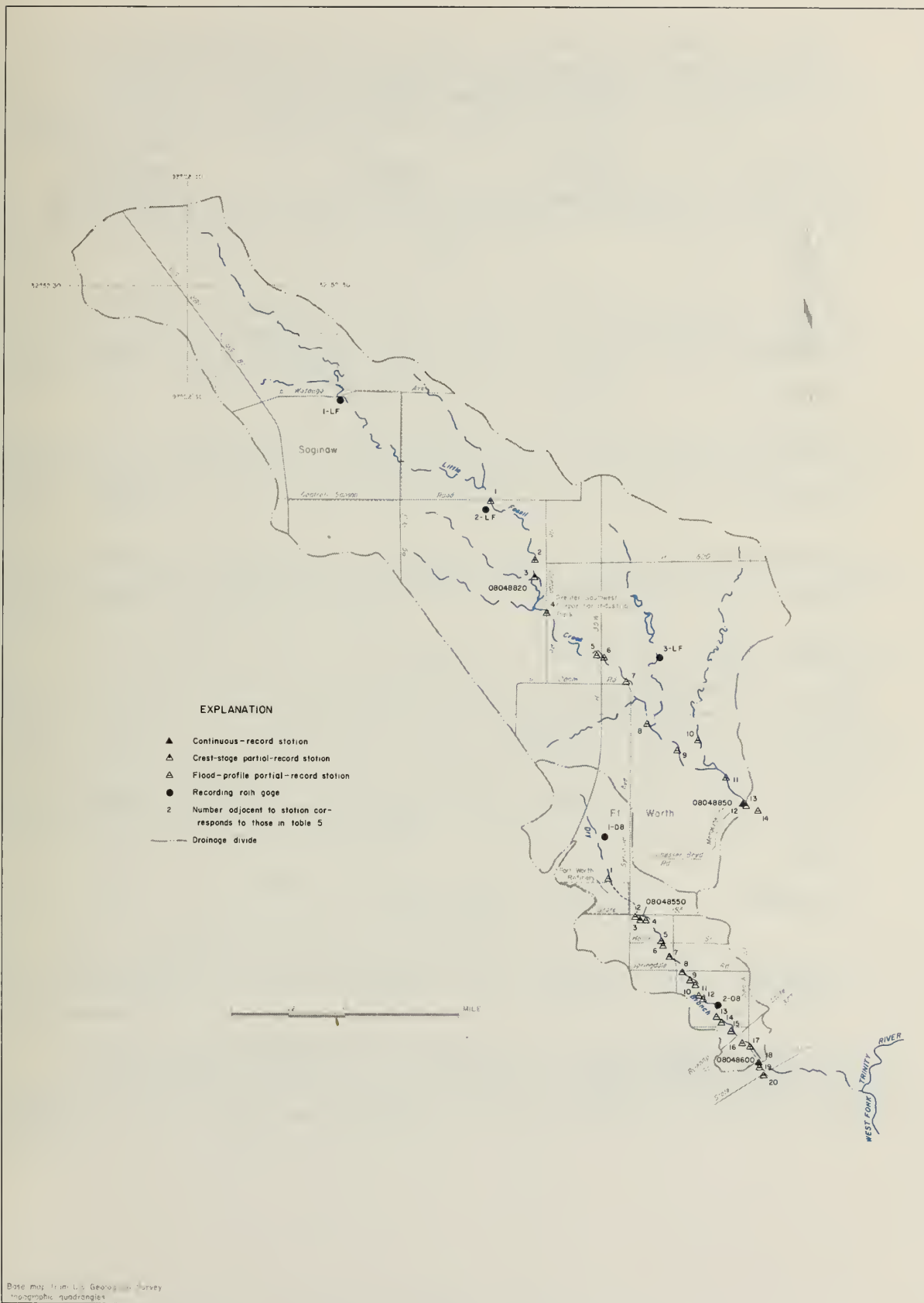
Dry Branch (fig. 3) is located in the northeast part of Fort Worth in Tarrant County. The headwaters originate 1.3 miles northwest of the Fort Worth Refinery. The stream upstream from the refinery flows southeasterly in an open channel and through a culvert beneath the refinery. Downstream from the refinery the stream flows southeastwardly through a residential section for about 3.0 miles to the West Fork Trinity River. The stream decreases in altitude from approximately 635 feet above mean sea level at the headwaters above the Fort Worth Refinery to 583.7 feet at Blandin Street, a distance of 1.8 miles. The stream then decreases in altitude from 583.7 feet above mean sea level at Blandin Street to 537.5 feet at Fain Street, a distance of 1.7 miles.

Little Fossil Creek (fig. 3) is located north of downtown Fort Worth in north-central Tarrant County. The headwaters originate in a rural area northwest of Saginaw, and the stream flows in an open channel southeasterly past Saginaw, through the Greater Southwest Corporation Industrial Park, and into the northeastern part of Fort Worth. The stream continues its southeasterly course from Fort Worth through Haltom City to Big Fossil Creek, and on into the West Fork Trinity River (fig. 1). The creek decreases in altitude from approximately 810 feet above mean sea level at the headwaters north of Saginaw to approximately 610 feet at the downstream side of Interstate Highway 820 in northeast Fort Worth, a distance of 6.0 miles. The stream then decreases in altitude from approximately 610 feet at the downstream side of Interstate Highway 820 to 548.6 feet at Mesquite Street, a distance of 3.3 miles.

### HYDROLOGIC INSTRUMENTS

Instruments to collect rainfall, runoff, and flood-profile data in the Sycamore Creek study area consist of 3 recording rain gages, 1 continuous-record stream-gaging station, and 16 flood-profile partial-record gages.





Base map from U.S. Geological Survey  
Topographic quadrangles

FIGURE 3.- Locations of hydraulic-instrument installations in the Dry Branch and Little Fossil Creek study areas

Table 1.--Summary of monthly rainfall-runoff relationship for the 1976 water year for the Seminary South Shopping Center and associated drainage area

Month	(2-ST) Rainfall (inches)	Runoff (inches) <u>1/</u>	Ratio of runoff to rainfall <u>1/</u>
<u>1975</u>			
October	0.06	0.11	1.83
November	1.67	1.00	.60
December	1.65	.45	.27
<u>1976</u>			
January	.05	.22	4.40
February	.37	.35	.95
March	2.61	1.46	.56
April	7.43	2.39	.32
May	4.51	2.12	.47
June	1.61	.63	.39
July	2.69	1.32	.49
August	2.92	1.13	.39
September	4.25	1.37	.32
Totals	29.81	12.55	0.42

1/ Data unadjusted for sustained low-flow effluents from the shopping center.

Instruments to collect rainfall and runoff data in the Sycamore Creek tributary study area consist of two recording rain gages and two continuous-record stream-gaging stations.

Instruments to collect rainfall, runoff, and flood-profile in the Dry Branch study area consist of 2 recording rain gages, 1 continuous-record stream-gaging station, 1 crest-stage partial-record station, and 18 flood-profile partial-record gages.

Instruments to collect rainfall-runoff, and flood-profile data in the Little Fossil Creek study area consist of 3 recording rain gages, 1 continuous-record stream-gaging station, 1 crest-stage partial-record station, and 12 flood-profile partial-record gages.

In the Little Fossil Creek and Dry Branch basins, three supplemental crest-stage flood-profile stations are located downstream from the study areas to provide additional floodflow elevations in the vicinity of the gaging stations.

Locations of hydrologic instruments in the study areas are shown on figures 2 and 3. Pertinent individual station information is included in the section "Compilation of data".

As of October 1, 1976, instrumentation in the Fort Worth study areas has been changed. All 16 flood-profile partial-record gages previously operated in the Sycamore Creek basin have been discontinued. The crest-stage partial-record station previously operated in the Dry Branch basin, and the continuous-record stream-gaging station, Sycamore Creek tributary at Interstate Highway 35-W, have both been discontinued. The remaining four continuous-record stream-gaging stations have been converted to crest-stage partial-record stations.

## DATA COLLECTION AND EXPLANATION

### Rainfall

Ten recording rain gages distributed throughout the four study areas provide a measure of total rainfall and are used to define rainfall intensities.

In this report, rainfall is compiled on a daily basis to facilitate comparison with the National Weather Service records, comparisons among study-area rain gages, and potential use in mathematical rainfall-runoff models.

Weighted-mean rainfall for a study area is determined by the Thiessen method using gages located within a particular drainage boundary. In one area, the Thiessen weight values are nearly equal and rainfall amounts are arithmetically averaged. Equations used to compute weighted-mean rainfall for the area above each continuous-record stream-gaging or crest-stage partial-record station are summarized in table 2.

### Runoff

Runoff data are based on discharge measurements and stage records at seven stream-gaging locations and peak elevations at 46 flood-profile locations. Of the seven stream-gaging locations, five are continuous-record stream-gaging stations and two are crest-stage partial-record gaging stations.

A water-stage recorder at a continuous-record stream-gaging station records the full range in stage, which together with measurements of streamflow allows the computation of total runoff at the station.

A water-stage recorder at a crest-stage partial-record gaging station records only stages above a selected elevation, which together with measurements of streamflow allows computation of the upper part of the runoff hydrograph. These stations are located at sites where limited streamflow data collected systematically over a period of years are needed.

A flood-profile partial-record gage, located at selected sites along the stream or on tributaries, records the peak water stage reached during the passage of a flood.

The purpose of the two continuous-record stream-gaging stations, located in the Sycamore Creek tributary basin (fig. 2), is (1) to collect hydrologic data from the residential-park area west of Seminary South Shopping Center (upstream station), and (2) to collect hydrologic data from both the residential-park area and the shopping center (downstream station). The difference in runoff between these two stations equals the runoff from the impervious area of the shopping center and its associated drainage area. Sustained low-flow occurs as a result of industrial effluents.

Table 2.--Equations used to compute weighted-mean rainfall for the area  
above each continuous-record stream-gaging  
or crest-stage partial-record station

Station	USGS gage identification No.	Weighted-mean rainfall equation
Sycamore Creek at Interstate Highway 35-W	08048520	$(0.33)(1-SC) + (0.48)(2-SC) + (0.19)(3-SC)$
Sycamore Creek tributary above Seminary South Shopping Center	08048530	$(0.78)(1-ST) + (0.22)(2-ST)$
Sycamore Creek tributary at Interstate Highway 35-W	08048540	$(0.56)(1-ST) + (0.44)(2-ST)$
Seminary South Shopping Center	--	$(1.00)(2-ST)$
Dry Branch at Blandin Street	08048550	$(1.00)(1-DB)$
Dry Branch at Fain Street	08048600	$(0.50)(1-DB) + (0.50)(2-DB)$
Little Fossil Creek at Interstate Highway 820	08048820	$(0.76)(1-LF) + (0.24)(2-LF)$
Little Fossil Creek at Mesquite Street	08048850	$(0.34)(1-LF) + (0.25)(2-LF) + (0.41)(3-LF)$

Note: For locations of stations by the U.S. Geological Survey Identification Number, see figs. 2 and 3. Rain-gage designations are SC-Sycamore Creek area, ST-Sycamore Creek tributary area, DB-Dry Branch area, and LF-Little Fossil Creek area; for rain gage locations, see figs. 2 and 3.



Information on monthly runoff (volumetric) and selected individual storm runoff from the shopping center is presented in later sections of this report. Analyses of an individual storm at the shopping center requires routing the discharge shown by the upstream hydrograph to the downstream station by using estimated travel times of 5 to 10 minutes (depending upon upstream discharge). It is assumed that little or no attenuation of upstream discharge occurs. The routed discharges are deducted from the downstream discharges; these differences equal the discharges (estimated) from the shopping center and its associated drainage area. Table 1 presents a summary of rainfall-runoff relationships for the current year at Seminary South Shopping Center.

#### SUMMARY OF DATA FOR THE 1976 WATER YEAR

Each year, storm events that will be useful in achieving the objectives of the study are selected for detailed rainfall-runoff analysis. The event during which the annual maximum discharge occurs is usually included in the selection. A digital computer was used to aid in the processing of some of the individual-station storm data.

During the 1976 water year, storms selected for analysis occurred on April 19-20, May 30-31, and September 19, 1976 in the Sycamore Creek basin; April 19-20, July 3, and August 29, 1976 in the Sycamore Creek tributary basin; and May 30-31 and July 16, 1976 in the Dry Branch and Little Fossil Creek basins.

Summaries of storm rainfall-runoff data for selected individual storms at streamflow stations and crest-stage partial-record stations are given in tables 3 and 4, respectively. Detailed storm rainfall and runoff records, hydrographs, and mass curves for each station are shown in the section "Compilation of data".

Other data, including daily and monthly rainfall and daily and monthly runoff for the 1976 water year, are included in the section "Compilation of data." In addition, flood-profile data for storms during the water year are listed in table 5.

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## ANNUAL STORM RAINFALL-RUNOFF SUMMARY DATA

Table 3.--Storm rainfall-runoff data, at streamflow stations,  
1976 water year

Date of Storm	Duration (hours)	Total	Rainfall (inches)			Runoff (inches)	Ratio runoff to rainfall	Maximum discharge (ft <sup>3</sup> /s)
			Maximum increment					
			15-minute	30-minute	60-minute			
08048520 Sycamore Creek at Interstate Highway 35-W, Fort Worth, Tex. (Drainage area, 17.7 mi <sup>2</sup> )								
April 19-20, 1976	3.5	1.99	0.56	0.79	1.15	1.45	0.73	4,570
May 30-31, 1976	5.0	1.30	.60	.91	1.01	.38	.29	1,240
Sept. 19, 1976	3.8	1.32	.53	.79	1.11	.26	.20	1,100
08048530 Sycamore Creek tributary above Seminary South Shopping Center, Fort Worth, Tex. (Drainage area, 0.97 mi <sup>2</sup> )								
April 19-20, 1976	3.1	1.31	.54	.66	.78	.72	.55	426
July 3, 1976	3.0	1.31	.82	.87	.90	.29	.22	265
Aug. 29, 1976	1.0	.92	.74	.89	.92	.20	.22	256

UNITED STATES DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY-TEXAS DISTRICT

## ANNUAL STORM RAINFALL-RUNOFF SUMMARY DATA

Table 3.--Storm rainfall-runoff data, at streamflow stations,  
1976 water year--Continued

Date of Storm	Duration (hours)	Total	Rainfall (inches)			Runoff (inches)	Ratio runoff to rainfall	Maximum discharge (ft <sup>3</sup> /s)
			Maximum increment					
			15-minute	30-minute	60-minute			
08048540 Sycamore Creek tributary at Interstate Highway 35-W, Fort Worth, Tex. (Drainage area, 1.35 mi <sup>2</sup> )								
April 19-20, 1976	3.1	1.31	0.54	0.66	0.78	0.77	0.59	710
July 3, 1976	3.0	1.32	.81	.86	.88	.35	.27	573
Aug. 29, 1976	1.2	.82	.64	.78	.81	.22	.27	333
Seminary South Shopping Center and associated drainage area, Fort Worth, Tex. (Drainage area, 0.38 mi <sup>2</sup> )								
April 19-20, 1976	3.1	1.31	.54	.66	.78	.89	.68	284
July 3, 1976	3.2	1.33	.79	.85	.87	.48	.36	308
Aug. 29, 1976	1.2	.55	.36	.51	.54	.24	.44	150



UNITED STATES DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY-TEXAS DISTRICT

## ANNUAL STORM RAINFALL-RUNOFF SUMMARY DATA

Table 3.--Storm rainfall-runoff data, at streamflow stations,  
1976 water year--Continued

Date of Storm	Duration (hours)	Total	Rainfall (inches)			Runoff (inches)	Ratio runoff to rainfall	Maximum discharge (ft <sup>3</sup> /s)
			Maximum increment					
			15-minute	30-minute	60-minute			
08048600 Dry Branch at Fain Street, Fort Worth, Tex. (Drainage area, 2.15 mi <sup>2</sup> )								
May 30-31, 1976	8.5	3.08	0.53	0.96	1.16	0.94	0.31	267
July 16, 1976	11.0	1.27	.73	1.05	1.12	.25	.20	152
08048850 Little Fossil Creek at Mesquite Street, Fort Worth, Tex. (Drainage area, 12.3 mi <sup>2</sup> )								
May 30-31, 1976	8.2	3.27	.50	.85	1.35	.68	.21	623
July 16, 1976	3.2	1.89	.90	1.34	1.76	.24	.13	396

UNITED STATES DEPARTMENT OF THE INTERIOR  
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## ANNUAL STORM RAINFALL-RUNOFF SUMMARY DATA

Table 4.--Storm rainfall-runoff data, at crest-stage partial-record stations,  
1976 water year

Date of Storm	Duration (hours)	Total	Rainfall (inches)			Runoff (inches)	Ratio runoff to rainfall	Maximum discharge (ft <sup>3</sup> /s)
			Maximum increment					
			15-minute	30-minute	60-minute			
08048550 Dry Branch at Blandin Street, Fort Worth, Tex. (Drainage area, 1.08 mi <sup>2</sup> )								
May 30-31, 1976	7.1	3.17	0.63	0.85	1.09	1.69	0.53	398
July 16, 1976	2.8	1.24	.60	1.05	1.12	.39	.31	250
08048820 Little Fossil Creek at Interstate Highway 820, Fort Worth, Tex. (Drainage area, 5.64 mi <sup>2</sup> )								
May 30-31, 1976	8.2	3.18	.56	.89	1.39	1.00	.31	451
July 16, 1976	3.5	1.80	.80	1.11	1.64	.42	.23	403

Table 5.--Peak elevations at flood-profile partial-record and continuous-record stations, 1976 water year

Map no.	Station no.	Station name and location of floodmark 1/	Drainage area (mi <sup>2</sup> )	Distance above mouth (miles) 2/	April 2D 1976	May 5 1976	Flood elevations			
							May 25 1976	May 31 1976	July 16 1976	Sept. 19 1976
Sycamore Creek basin										
1		Sycamore Creek at Sycamore School Road-UsLb	-	11.5	693.75	--	692.86	--	--	69D.80
2		Sycamore Creek near intersection of Trimble Drive and Hallmark Drive (Hallmark Addition)-Lb	-	10.5	677.28	--	675.58	--	--	--
3		Sycamore Creek at Hemphill Street-UsRb	-	9.2	651.36	--	647.6B	--	--	--
4		Sycamore Creek tributary at Sycamore Creek Road-UsLb	-	-	--	--	--	--	--	66B.37
5	0804B52D*	Sycamore Creek at Interstate Highway 35W-UsLb	17.7	8.7	638.91	--	635.13	--	--	634.17
6		Sycamore Creek at Interstate Highway 820-DsRb	-	8.3	632.97	--	628.22	--	--	626.91
7		Sycamore Creek at Oak Grove Road-DsLb	-	7.7	620.11	--	615.93	--	--	--
8		Sycamore Creek below Missouri-Pacific RR-1,50D ft DsLb	-	7.2	6D6.94	--	6D3.87	--	--	--
9		Sycamore Creek at Seminary Drive-UsRb	-	6.3	5B7.81	--	586.72	--	--	--
10		Sycamore Creek at Butler Street (extension)-225 ft DsLb	-	5.5	573.14	--	--	--	--	--
11		Sycamore Creek at Riverside Drive-UsRb	-	4.8	564.17	--	559.41	--	--	558.98
12		Sycamore Creek at Glen Garden Drive-UsRb	-	4.2	551.19	--	--	--	--	--
13		Sycamore Creek in Cobb Park midway between Glen Garden Drive and U.S. Highway 287-Lb	-	3.7	547.12	--	541.62	--	--	54D.80
14		Sycamore Creek at U.S. Highway 287-DsRb	-	3.D	541.83	--	--	--	--	--
15		Sycamore Creek at West Rosedale Street-DsRb	-	2.2	523.39	--	522.17	--	--	522.D2
16		Sycamore Creek at Vickery Boulevard-UsLb	-	1.7	522.04	--	521.72	--	--	--
17		Sycamore Creek at Lancaster Avenue-UsLb	-	.9	5D7.21	--	5D3.46	--	--	500.36
Dry Branch basin										
1		Dry Branch at Texas and Pacific RR Spur-Rb	-	3.41	--	--	--	597.5D	--	--
2		Dry Branch at Grace Street-DsLb	-	2.86	--	586.96	--	588.91	587.81	--
3	0804B55D†	Dry Branch at Blandin Street-24 ft UsLb	1.0B	2.82	--	586.D8	--	588.11	586.96	--
4		Dry Branch at Blandin Street-DsLb	-	2.8D	--	585.99	--	587.82	586.84	--
5		Dry Branch at Hollis Street-60 ft UsRb	-	2.52	--	582.35	--	586.21	538.45	--
6		Dry Branch at Hollis Street-10 ft DsLb	-	2.49	--	--	--	581.D7	581.34	--
7		Dry Branch at Selma Street-12D ft UsLb	-	2.38	--	58D.09	--	--	579.82	--
8		Dry Branch at Springdale-DsRb	-	2.18	--	568.12	--	57D.86	568.40	--
9		Dry Branch at Bonnie Brae-80 ft UsLb	-	2.D7	--	--	--	570.77	567.71	--
10		Dry Branch between Bonnie Brae and Aster Court -100 ft UsRb	-	1.98	--	--	--	569.44	--	--
11		Dry Branch at Carnation Street-20 ft UsRb	-	1.89	--	563.17	--	567.28	562.81	--
12		Dry Branch at Carnation Street-100 ft DsLb	-	1.85	--	562.59	--	565.45	562.40	--
13		Dry Branch at Robinwood Street-150 ft UsRb	-	1.65	--	558.49	--	564.73	--	--
14		Dry Branch between Robinwood and Yucca Streets -15D ft UsLb	-	1.56	--	--	--	558.44	--	--
15		Dry Branch between Yucca and Belknap Streets-Rb	-	1.46	--	--	--	554.93	--	--
16		Dry Branch at Beach Street-UsLb	-	1.29	--	543.73	--	545.83	--	--
17		Dry Branch at Beach Street-DsRb	-	1.23	--	542.89	--	544.39	543.19	--
18	DB04B600*	Dry Branch at Fain Street-UsRb	2.15	1.08	--	54D.39	--	541.9D	540.81	--
19		Dry Branch at Fain Street-DsRb	-	1.06	--	--	--	54D.96	539.88	--
2D		Dry Branch at State Highway 121-UsLb	-	.99	--	537.91	--	537.69	--	--
Little Fossil Creek basin										
1		Little Fossil Creek at Cantrell-Samson Roads-DsLb	-	8.42	--	--	--	639.83	639.01	--
2		Little Fossil Creek at Interstate Highway 820-UsRb	-	7.73	--	--	--	617.33	617.DD	--
3	0804B20†	Little Fossil Creek at Interstate Highway B20-DsRb	5.64	7.55	--	--	--	613.59	613.47	--
4		Little Fossil Creek at Old Denton Road-DsRb	-	7.14	--	--	--	604.02	6D4.91	--
5		Little Fossil Creek at Interstate Highway 35W-UsRb	-	6.35	--	--	--	592.4D	592.59	--
6		Little Fossil Creek at Interstate Highway 35W-DsLb	-	6.26	--	--	--	591.51	589.63	--
7		Little Fossil Creek at Watauga (Sylvania Avenue)-UsLb	-	5.93	--	--	--	585.76	--	--
8		Little Fossil Creek midway between Watauga Road and St. Louis Southwestern RR-Rb	-	5.50	--	--	--	--	576.36	--
9		Little Fossil Creek at St. Louis Southwestern RR-DsRb	-	5.12	--	--	--	569.67	569.63	--
10		Little Fossil Creek tributary at St. Louis Southwestern RR-DsRb	-	-	--	--	--	574.49	--	--
11		Little Fossil Creek at Texas & Pacific RR-3D ft DsLb	-	4.54	--	--	--	56D.18	--	--
12	0804B850*	Little Fossil Creek at Mesquite Street-Rb	12.3	4.24	--	--	--	554.26	553.44	--
13		Little Fossil Creek at Beach Street-UsRb	-	4.20	--	--	--	554.3D	--	--
14		Little Fossil Creek at Beach Street-DsRb	-	4.11	--	--	--	--	--	--

\* Continuous record station.

† Crest-stage partial-record station.

1/ Legend to location of floodmark: Ds-downstream; Us-upstream; Lb-left bank; Rb-right bank.

2/ Distances above mouth in Dry Branch basin from report "Drainage Master Plan for City of Fort Worth, Public Works Department Dry Branch Watershed," March 1967, by Knowlton-Ratliff-English, Consulting Engineers.

Yearly rainfall and runoff for the 1976 water year for the study areas with continuous-record gaging stations in the Fort Worth metropolitan area are summarized in the following table:

Station	Yearly mean rainfall (inches)	Yearly runoff (inches)	Ratio of runoff to rainfall
Sycamore Creek at Inter- state Highway 35-W (08048520)	29.69	6.08	0.20
Sycamore Creek tributary above Seminary South Shopping Center (08048530)	30.03	9.36	.31
Sycamore Creek tributary at Interstate Highway 35-W (08048540)	29.97	10.25	.34
Seminary South Shopping Center and associated drainage area	29.81	12.54	.42
Dry Branch at Fain Street (08048600)	28.89	6.09	.21
Little Fossil Creek at Mesquite Street (08048850)	28.04	2.82	.10

NOTE: See "Remarks" paragraph of station descriptions in the section "Compilation of data" for information about regulation or diversion.

C O M P I L A T I O N     O F     D A T A



# TRINITY RIVER BASIN

08048520 Sycamore Creek at Interstate Highway 35-W, Fort Worth, Tex.

LOCATION.--Lat 32°39'55", long 97°19'16", Tarrant County, on left bank at upstream side of bridge on frontage road on upstream side of Interstate Highway 35-W, 5.8 miles (9.3 km) south of Fort Worth City Hall, and 8.9 miles (14.3 km) upstream from mouth.

DRAINAGE AREA.--17.7 mi<sup>2</sup> (45.8 km<sup>2</sup>).

PERIOD OF RECORD.--October 1969 to September 1976 (discontinued as a continuous-record station; converted to a flood-hydrograph partial-record station).

GAGE.--Water-stage recorder. Datum of gage is at mean sea level.

AVERAGE DISCHARGE.--7 years, 9.45 ft<sup>3</sup>/s (0.268 m<sup>3</sup>/s), 7.25 in/yr (184 mm/yr), 6,850 acre-ft/yr (8.45 hm<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 4,570 ft<sup>3</sup>/s (129 m<sup>3</sup>/s) Apr. 20 (elevation, 638.91 ft or 194.740 m); no flow Aug. 14-25.  
Period of record: Maximum discharge, 5,450 ft<sup>3</sup>/s (164 m<sup>3</sup>/s) Oct. 19, 1971 (elevation, 639.77 ft or 195.002 m); no flow at times.  
Flood of May 6, 1969, reached an elevation of 640.1 ft (195.10 m), from floodmarks (discharge, 5,800 ft<sup>3</sup>/s or 164 m<sup>3</sup>/s). Flood in 1908 reached an elevation of 645.9 ft (196.87 m), and flood in 1938 reached an elevation of 644.4 ft (196.41 m), from information by State Highway Department.

REMARKS.--Records good above 120 ft<sup>3</sup>/s (3.40 m<sup>3</sup>/s) and fair below. Flow is slightly affected by several small farm ponds on tributaries above station. At times, low flow may be sustained by effluents from commercial establishments. Two recording rain gages are operated in basin above this station, and one recording rain gage is located at station.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976 MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.01	.10	.41	.24	.11	.06	.38	3.6	8.3	.02	.10	52
2	.01	21	.20	.17	.10	.05	.32	2.2	5.2	.02	.12	5.0
3	.01	1.5	.22	.13	.11	.02	.26	1.2	3.5	.80	.04	66
4	.02	.47	.19	.12	.20	.04	.24	1.0	2.4	5.5	.01	3.2
5	.02	.38	.16	.12	.14	.04	.28	10	3.1	6.1	.01	1.1
6	.02	.30	.19	.13	.13	.08	.24	9.0	5.5	1.8	.42	.52
7	.03	.19	.16	.23	.15	.96	19	4.0	3.7	.50	.11	.47
8	.04	.15	.15	.11	.15	14	2.1	4.0	1.0	.27	.03	3.2
9	.03	.12	.23	.24	.13	1.3	.64	2.1	.50	.27	.02	3.9
10	.02	.12	.30	.18	.15	.34	.40	1.5	.40	.45	.04	1.3
11	.02	.10	.25	.15	.15	15	.29	4.3	.40	.55	.68	.43
12	.02	.10	.19	.16	.15	6.9	.28	2.2	.30	.31	.07	.24
13	.02	.10	.19	.18	.15	1.2	33	6.9	.30	.47	.02	.24
14	.02	.10	3.4	.14	.16	.59	1.6	2.4	.20	1.2	0	.19
15	.02	.11	.38	.12	.13	.32	2.6	2.5	.20	3.1	0	.19
16	.02	.13	.15	.14	.13	.28	49	.79	.15	.49	0	.15
17	.02	.66	.11	.15	3.4	.24	45	.59	.14	31	0	.14
18	.02	.29	.10	.14	.64	.16	120	.47	10	2.8	0	1.1
19	.02	.68	.10	.12	.12	.15	553	.44	29	.75	0	118
20	.02	1.9	.12	.14	.99	.17	607	.38	1.8	.40	0	6.5
21	.02	.26	.19	.15	2.7	.15	10	.38	.68	.26	0	1.8
22	.01	.10	.13	.15	.15	.21	7.5	.26	.47	.16	0	.81
23	.06	.06	.12	.15	.09	.19	7.3	6.8	.67	.14	0	.55
24	.08	.06	29	.15	.07	102	6.2	1.4	.39	.20	0	.44
25	.08	.09	9.9	.16	.07	4.0	4.9	276	.40	12	0	.36
26	.06	.11	2.6	.11	.08	2.0	3.7	35	.44	2.1	1.5	.28
27	.06	.10	1.1	.08	.10	1.0	2.5	6.6	.17	.50	1.0	.24
28	.06	.15	.43	.08	.09	6.4	14	4.5	.08	.22	4.7	3.6
29	.06	2.5	1.5	.08	.09	2.6	11	3.1	.04	.14	5.5	.79
30	.06	6.9	.35	.08	---	.62	5.0	1.4	.02	.10	2.3	.62
31	.08	---	.28	.09	---	.39	---	171	---	.07	29	---
TOTAL	1.04	38.83	52.80	4.39	10.83	161.46	1507.73	566.01	79.45	151.89	45.67	273.36
MEAN	.034	1.29	1.70	.14	.37	5.21	50.3	18.3	2.65	4.90	1.47	9.11
MAX	.08	21	29	.24	3.4	102	607	276	29	80	29	118
MIN	.01	.06	.10	.08	.07	.02	.24	.26	.02	.02	0	.14
CFSM	.001	.07	.10	.007	.02	.29	2.84	1.03	.15	.28	.08	.51
IN.	.002	.08	.11	.009	.02	.34	3.17	1.19	.17	.32	.10	.57
AC-FT	2.1	.77	105	8.7	21	320	2990	1120	158	301	91	542
(††)	.06	1.76	1.59	.03	.47	2.85	7.84	5.06	1.14	3.30	1.24	4.35

CAL YR 1975	TOTAL	4868.14	MEAN	13.3	MAX	796	MIN	0	CFSM	.75	IN	10.23	AC-FT	9660	††	28.56
WTR YR 1976	TOTAL	2893.46	MEAN	7.91	MAX	607	MIN	0	CFSM	.45	IN	6.08	AC-FT	5740	††	29.69

## PEAK DISCHARGE (BASE, 800 FT<sup>3</sup>/S)

DATE	TIME	ELEV.	DISCHARGE	DATE	TIME	ELEV.	DISCHARGE
3-24	0700	633.58	816	5-25	1800	633.82	937
4-18	2330	636.92	2,810	5-31	0130	634.44	1,240
4-20	0030	638.91	4,570	9-19	1845	634.17	1,100
5-25	1445	635.13	1,600				

†† Weighted-mean rainfall, in inches, based on three rain gages.

TRINITY RIVER BASIN

08048530 Sycamore Creek tributary above Seminary South Shopping Center, Fort Worth, Tex.

LOCATION.--Lat 32°41'08", long 97°19'44", Tarrant County, on right bank near entrance to culvert under Missouri, Kansas, and Texas Railroad, 0.2 mile (0.3 km) northeast of intersection of Hemphill Street and Seminary Drive in Fort Worth, 1.8 miles (2.9 km) upstream from mouth, and 4.5 miles (7.2 km) south of Fort Worth City Hall.

DRAINAGE AREA.--0.97 mi<sup>2</sup> (2.51 km<sup>2</sup>).

PERIOD OF RECORD.--October 1969 to September 1976 (discontinued as a continuous-record station; converted to a flood-hydrograph partial-record station).

GAGE.--Water-stage recorder with concrete weir and culvert control. Datum of gage is at mean sea level.

AVERAGE DISCHARGE.--7 years, 0.67 ft<sup>3</sup>/s (0.0190 m<sup>3</sup>/s), 9.38 in/yr (238 mm/yr), 485 acre-ft/yr (598,000 m<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 426 ft<sup>3</sup>/s (12.1 m<sup>3</sup>/s) Apr. 19 (elevation, 653.30 ft or 199.126 m); minimum daily, 0.01 ft<sup>3</sup>/s (0.0003 m<sup>3</sup>/s) Dec. 7, 8, Jan. 28, Feb. 5-8.

Period of record: Maximum discharge, 584 ft<sup>3</sup>/s (16.5 m<sup>3</sup>/s) Oct. 19, 1971 (elevation, 655.49 ft or 199.793 m); no flow at times in July and August 1970.

Maximum stage since 1966, about 656.0 ft (199.95 m) in August 1966 (discharge not determined), from information by local resident.

REMARKS.--Records fair below 0.20 ft<sup>3</sup>/s (0.006 m<sup>3</sup>/s) and good above. Low flow is sustained by effluent from commercial establishments above station. One recording rain gage is operated in basin above station, and one is located below station in Seminary South Shopping Center. Records of precipitation and hydrologic data for selected storms are published elsewhere in basic-data reports.

DISCHARGE IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.03	.06	.04	.05	.03	.04	.06	.10	.35	.07	.06	7.4
2	.13	3.5	.13	.06	.02	.05	.07	.09	.15	.05	.03	2.6
3	.03	.02	.02	.06	.02	.06	.12	.09	.15	7.5	.18	4.5
4	.03	.03	.03	.06	.06	.06	.07	.15	.27	.50	.32	
5	.14	.02	.08	.05	.01	.02	.07	.22	.64	.72	.63	.20
6	.12	.03	.02	.05	.01	.03	.07	1.0	.11	.06	.46	.19
7	.04	.03	.01	.08	.01	1.4	3.1	.25	.11	.06	.04	.15
8	.02	.02	.01	.44	.01	1.4	.11	.07	.11	.05	.03	.43
9	.03	.02	.05	.12	.02	.04	.09	.07	.09	.06	.03	.71
10	.03	.03	.03	.32	.03	.03	.07	.31	.09	.18	.03	.08
11	.02	.04	.03	.12	.03	1.7	.06	.07	.09	.04	.30	.06
12	.02	.03	.03	.05	.03	.15	.53	.55	.03	.04	1.0	.04
13	.02	.03	.03	.05	.03	.03	2.9	.03	.07	.03	.08	.04
14	.02	.03	.03	.05	.03	.07	.11	.06	.07	.48	.65	.36
15	.02	.04	.03	.05	.04	.05	3.5	.04	.06	.47	.10	.07
16	.03	.02	.03	.05	.04	.03	2.6	.04	.07	.16	.09	.06
17	.03	.03	.03	.06	.03	.03	6.7	.04	.09	3.6	.15	.06
18	.12	.02	.03	.03	.02	.04	13	.03	5.0	.12	.32	1.1
19	.04	.44	.03	.31	.02	.06	27	.03	4.2	.10	.07	13
20	.15	.03	.03	.53	.01	.09	6.6	.04	.09	.08	.06	.47
21	.11	.04	.03	.63	.06	.04	.32	.04	.09	.04	.22	.04
22	.02	.05	.03	.32	.05	.24	.11	.09	.07	.09	.07	.04
23	.06	.02	.03	.05	.04	.75	.54	.55	.07	.06	.07	.06
24	.04	.02	4.3	.14	.05	13	.42	.05	.09	.07	.27	.04
25	.04	.04	1.1	.14	.03	.32	.13	0.0	.11	.42	.10	.06
26	.02	.08	.11	.03	.02	.09	.11	.90	.07	.06	1.1	.04
27	.02	.02	.23	.06	.02	.04	.10	.10	.06	.06	.11	.04
28	.03	.11	.04	.01	.02	1.4	2.8	.06	.06	.05	4.4	2.0
29	.02	2.6	.05	.02	.03	.07	.86	.05	.04	.05	5.1	.04
30	.03	.12	.06	.02	---	.06	.12	.70	.03	.06	.50	.04
31	.05	---	.06	.04	---	.06	---	17	---	.08	9.2	---
TOTAL	1.26	7.78	11.81	4.22	2.46	22.55	72.34	34.32	12.47	15.22	25.95	33.84
MFAN	.041	.26	.38	.14	.085	.73	2.41	1.11	.42	.49	.84	1.13
MAX	.19	3.5	9.3	.69	.87	13	27	17	5.0	7.5	9.2	13
MIN	.02	.02	.01	.01	.01	.02	.06	.03	.03	.03	.03	.04
CFSM	.04	.27	.39	.14	.09	.75	2.48	1.14	.43	.51	.87	1.16
IN.	.05	.30	.45	.16	.09	.86	2.77	1.31	.48	.58	.99	1.30
AC-FT	2.5	15	23	8.4	4.4	65	143	68	25	30	51	67
(††)	.06	1.52	1.64	.05	.39	2.58	7.20	4.43	1.52	2.70	3.49	4.45
CAL YR 1975	TOTAL 258.64	MEAN .71	MAX 24	MIN .01	CFSM .73	IN 9.91	AC-FT 513	†† 30.90				
WTR YR 1976	TOTAL 244.22	MEAN .67	MAX 27	MIN .01	CFSM .69	IN 4.36	AC-FT 484	†† 30.03				

PEAK DISCHARGE (BASE, 200 FT<sup>3</sup>/S)

DATE	TIME	ELEV.	DISCHARGE	DATE	TIME	ELEV.	DISCHARGE
4-18	2235	652.42	298	7- 3	1735	652.14	265
4-19	0115	652.08	258	8-29	1850	652.06	256
4-19	2320	653.30	426	9- 1	1155	651.65	214
5-31	0015	652.75	343	9-19	1740	652.57	318

†† Weighted-mean rainfall, in inches, based on two rain gages.

TRINITY RIVER BASIN

08048540 Sycamore Creek tributary at Interstate Highway 35-W, Fort Worth, Tex.

LOCATION.--Lat 32°41'18", long 97°19'11", Tarrant County, on left bank at culvert on downstream side of access road to Interstate Highway 35-W, 0.3 mile (0.5 km) north of Seminary Drive in Fort Worth, 1.2 miles (1.9 km) upstream from mouth, and 4.3 miles (6.9 km) south of Fort Worth City Hall.

DRAINAGE AREA.--1.35 mi<sup>2</sup> (3.50 km<sup>2</sup>).

PERIOD OF RECORD.--October 1969 to September 1976 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is at mean sea level.

AVERAGE DISCHARGE.--7 years, 1.15 ft<sup>3</sup>/s (0.0326 m<sup>3</sup>/s), 11.57 in/yr (294 mm/yr), 833 acre-ft/yr (1.03 hm<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 710 ft<sup>3</sup>/s (20.1 m<sup>3</sup>/s) Apr. 19 (elevation, 624.73 ft or 190.418 m); minimum daily, 0.02 ft<sup>3</sup>/s (0.001 m<sup>3</sup>/s) Oct. 6, 14.

Period of record: Maximum discharge, 1,100 ft<sup>3</sup>/s (31.2 m<sup>3</sup>/s) Oct. 19, 1971 (elevation, 628.41 ft or 191.539 m); minimum daily, 0.01 ft<sup>3</sup>/s (0.0003 m<sup>3</sup>/s) for many days in 1970-71.

Maximum elevation since 1969, that of Oct. 19, 1971. Flood in May 1969 reached an elevation of 627.2 ft (191.17 m), from floodmarks.

REMARKS.--Records fair. Records include runoff from a shopping center. Low flows are sustained by effluents. Two recording rain gages are operated in basin above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.04	.14	.17	.04	.07	.07	.12	.19	.47	.23	.10	11
2	.04	.04	.24	.04	.07	.09	.10	.15	.33	.19	.09	2.7
3	.04	.10	.06	.04	.07	.09	.25	.12	.31	.12	.23	.00
4	.04	.06	.06	.06	.07	.09	.12	.12	.24	.46	.69	.60
5	.20	.05	.17	.06	.07	.06	.12	4.4	1.0	1.1	.90	.32
6	.02	.09	.04	.04	.07	.04	.12	1.4	.17	.23	.63	.27
7	.05	.06	.06	.15	.07	3.0	3.5	.60	.17	.19	.09	.23
8	.07	.05	.06	.69	.07	3.1	.22	.23	.22	.19	.06	.60
9	.07	.04	.11	.32	.06	.12	.14	.19	.19	.33	.06	1.2
10	.07	.07	.07	.45	.04	.23	.15	.45	.14	.63	.06	.15
11	.07	.04	.06	.14	.12	4.2	.15	.15	.13	.22	.34	.12
12	.07	.10	.07	.09	.19	.52	.70	.72	.13	.21	1.5	.06
13	.07	.04	.06	.12	.07	.23	3.4	1.0	.15	.37	.12	.06
14	.02	.04	.04	.12	.07	.19	.19	.19	.12	1.3	.92	.52
15	.07	.04	.04	.07	.09	.19	4.0	.14	.12	1.2	.13	.12
16	.05	.04	.04	.09	.12	.15	2.7	.18	.19	.47	.12	.07
17	.04	.04	.04	.15	2.1	.15	7.3	.13	.15	5.4	.14	.05
18	.05	.04	.04	.15	.04	.32	19	.18	7.7	.27	.42	1.0
19	.04	1.1	.14	.52	.06	.15	38	.11	5.4	.19	.10	1.4
20	.07	.10	.04	.60	1.9	.12	4.2	.13	.15	.15	.08	.69
21	.24	.09	.04	.71	.15	.23	.45	.13	.12	.19	.28	.09
22	.04	.04	.04	.49	.06	.32	.27	.18	.09	.19	.10	.09
23	.21	.04	.04	.12	.06	.85	.85	.77	.09	.19	.10	.09
24	.04	.04	12	.36	.07	20	.40	.17	.23	.19	.35	.12
25	.10	.12	1.9	.24	.04	.45	.23	13	.27	1.0	.22	.09
26	.04	.27	.23	.12	.04	.12	.19	1.3	.09	.12	1.4	.19
27	.04	.07	.27	.12	.04	.12	.19	.23	.07	.09	.19	.15
28	.04	.24	.07	.03	.04	1.9	3.7	.19	.07	.12	6.7	3.0
29	.04	5.2	.07	.04	.04	.15	1.5	.17	.15	.12	6.9	.16
30	.04	.33	.07	.07	---	.09	.23	1.0	.15	.23	1.0	.12
31	.11	---	.07	.18	---	.09	---	27	---	.15	13	---
TOTAL	2.40	14.00	16.37	6.44	6.00	37.45	96.71	55.96	18.87	28.72	37.51	47.86
MEAN	.077	.460	.53	.21	.21	1.21	3.22	1.81	.63	.93	1.21	1.60
MAX	.33	.44	.12	.71	2.1	.20	.38	.27	7.7	.12	.13	.18
MIN	.02	.04	.04	.03	.04	.06	.10	.11	.07	.09	.06	.05
CFSM	.04	.44	.39	.16	.16	.90	2.34	1.34	.47	.69	.90	1.19
IN+	.07	.50	.45	.18	.17	1.03	2.66	1.54	.52	.79	1.03	1.32
AC-FT	4.4	36	32	13	12	74	192	111	37	57	74	95
(††)	.06	1.56	1.64	.05	.39	2.59	7.26	4.45	1.55	2.70	3.33	4.39

CAL YR 1975 TOTAL 457.27 MEAN 1.25 MAX 42 MIN .02 CFSM .93 IN 12.59 AC-FT 907 †† 30.65  
WTR YR 1976 TOTAL 372.33 MEAN 1.02 MAX 36 MIN .02 CFSM .76 IN 10.25 AC-FT 739 †† 29.97

PEAK DISCHARGE (BASE, 300 FT<sup>3</sup>/S)

DATE	TIME	ELEV.	DISCHARGE	DATE	TIME	ELEV.	DISCHARGE
11-29	2205	622.41	369	7- 3	1740	623.77	573
4-18	2240	622.76	419	8-29	1855	622.15	333
4-19	0120	622.18	337	9- 1	1200	622.40	368
4-19	2325	624.73	710	9-19	1645	622.20	340
5-31	0020	624.51	680	9-19	1745	622.76	419

†† Weighted-mean rainfall, in inches, based on two rain gages.



TRINITY RIVER BASIN

D80486DD Dry Branch at Fain Street, Fort Worth, Tex.

LOCATION.--Lat 32°46'34", long 97°17'18", Tarrant County, on right bank 30 ft (9 m) upstream from culvert on Fain Street, at intersection of Fain and Beach Streets in Fort Worth, 1.1 miles (1.8 km) upstream from mouth, and 2.9 miles (4.7 km) northeast of Tarrant County Courthouse.

DRAINAGE AREA.--2.15 mi<sup>2</sup> (5.57 km<sup>2</sup>).

PERIOD OF RECORD.--October 1968 to September 1976 (discontinued as a continuous-record station; converted to a flood-hydrograph partial-record station).

GAGE.--Water-stage recorder and concrete culvert control. Datum of gage is 537.51 ft (163.833 m) above mean sea level.

AVERAGE DISCHARGE.--8 years, 1.53 ft<sup>3</sup>/s (0.0433 m<sup>3</sup>/s), 9.66 in/yr (245 mm/yr), 1,110 acre-ft/yr (1.37 hm<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 267 ft<sup>3</sup>/s (7.56 m<sup>3</sup>/s) May 31 (gage height, 4.39 ft or 1.338 m); no flow for many days.

Period of record: Maximum discharge, 447 ft<sup>3</sup>/s (12.7 m<sup>3</sup>/s) July 25, 1975 (gage height, 5.86 ft or 1.786 m); no flow at times.

Maximum stage since April 1964, 9.0 ft (2.74 m) in April 1966 at upstream side of Fain Street culvert, from information by local resident (discharge not determined).

REMARKS.--Records good above 1.0 ft<sup>3</sup>/s (0.028 m<sup>3</sup>/s) and fair below. Low flow is sustained by effluent from commercial establishments and industry above station. Two recording rain gages are operated in basin above station.

REVISIONS.--WSP 2122: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	.15	.11	.10	0	0	0	.05	.84	0	0	6.0
2	0	12	.08	.02	0	0	0	.03	.22	.10	0	8.4
3	0	.73	.08	0	0	.02	0	.01	.03	6.7	0	9.3
4	0	.38	.07	0	0	.02	0	0	.02	2.4	0	.43
5	.49	.23	.06	0	0	.04	0	14	.01	.56	0	.18
6	.47	.13	.05	0	0	.02	0	2.8	.01	.01	0	.09
7	.33	.08	.05	0	0	1.8	4.6	.07	.28	.01	.01	0
8	.14	.06	.05	0	0	6.5	.11	.13	.03	.01	0	0
9	.14	.04	.04	.55	0	.03	.02	.02	0	3.7	0	.11
10	.10	.03	.01	.02	0	.01	0	.26	0	.20	0	.01
11	.02	.02	.02	0	0	4.2	0	.16	0	.06	0	.06
12	.01	.01	.03	0	0	.78	.05	2.2	0	.03	0	.05
13	.05	.01	.02	0	0	.20	4.3	1.4	0	0	0	0
14	.05	.04	.02	0	0	.17	.07	.03	.02	.55	0	0
15	.05	0	.02	0	0	.04	2.3	.02	.31	1.6	0	.17
16	.05	0	.02	.38	0	.01	6.5	.01	.02	14	0	.01
17	.05	0	.02	.03	.88	0	10	0	0	1.3	0	0
18	.03	0	.02	.01	.04	0	6.6	0	5.3	.04	0	3.1
19	.17	1.6	.02	.04	0	.35	17	0	10	.31	0	12
20	.33	.13	.02	.06	1.6	.02	7.2	0	.26	.02	.05	1.3
21	.33	.05	.03	.01	.73	0	.21	0	.14	0	.09	.12
22	.22	.05	.03	0	.04	0	.04	0	.02	0	.16	.03
23	.05	.05	.03	0	.03	0	.21	0	0	0	.38	.01
24	0	.03	17	.01	.02	16	1.6	0	.30	0	3.8	0
25	0	.03	2.4	.04	.02	.24	.03	4.6	.83	.39	.06	0
26	0	.03	.32	0	.02	.04	.02	.35	.18	.01	0	0
27	0	.03	.21	0	.02	.01	.02	.01	.03	0	0	0
28	.06	.03	.14	0	.02	1.3	3.8	0	.03	0	0	5.5
29	.21	3.9	.14	0	.01	.09	1.3	0	0	0	9.9	.10
30	.22	1.3	.14	0	---	.01	.06	9.8	0	0	1.3	.02
31	.31	---	.14	0	---	0	---	44	---	0	9.6	---
TOTAL	3.44	21.14	21.39	1.27	3.47	31.98	66.10	79.95	18.88	32.00	25.35	46.99
MEAN	.13	.70	.69	.041	.12	1.03	2.20	2.58	.63	1.03	.82	1.57
MAX	.49	12	17	.55	1.6	16	17	44	10	14	9.9	12
MIN	0	0	.01	0	0	0	0	0	0	0	0	0
CFSM	.06	.33	.32	.02	.06	.48	1.02	1.20	.29	.48	.38	.73
IN.	.07	.37	.37	.02	.06	.55	1.14	1.38	.33	.55	.44	.81
AC-FT	7.7	42	42	2.5	6.9	63	131	159	37	63	50	93
(††)	0	2.04	1.67	.14	.47	2.54	5.22	5.49	1.73	3.33	2.78	3.48

CAL YP 1975 TOTAL 643.30 MEAN 1.76 MAX 156 MIN 0 CFSM .82 IN 11.13 AC-FT 1280 †† 32.04  
WTR YR 1976 TOTAL 352.40 MEAN .96 MAX 44 MIN 0 CFSM .45 IN 6.09 AC-FT 699 †† 28.89

†† Weighted-mean rainfall, in inches, based on two rain gages.

# TRINITY RIVER BASIN

08048850 Little Fossil Creek at Mesquite Street, Fort Worth, Tex.

LOCATION.--Lat 32°48'33", long 97°17'28", Tarrant County, on right bank at intersection of Mesquite Street and Broadway Avenue in Fort Worth, 150 ft (46 m) upstream from bridge on Alta Vista Road (Beach Street), 4.3 miles (6.9 km) northeast of county courthouse, and approximately 4.3 miles (6.9 km) upstream from Big Fossil Creek.

DRAINAGE AREA.--12.3 mi<sup>2</sup> (31.9 km<sup>2</sup>).

PERIOD OF RECORD.--October 1968 to September 1976 (discontinued as a continuous-record station; converted to a flood-hydrograph partial-record station).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 548.62 ft (167.219 m) above mean sea level.

AVERAGE DISCHARGE.--8 years, 5.70 ft<sup>3</sup>/s (0.161 m<sup>3</sup>/s), 6.29 in/yr (160 mm/yr), 4,130 acre-ft/yr (5.09 hm<sup>3</sup>/yr).

EXTREMES.--Current year: Maximum discharge, 623 ft<sup>3</sup>/s (17.6 m<sup>3</sup>/s) May 31 (gage height, 5.64 ft or 1.719 m); no flow Oct. 3 to Nov. 1, Aug. 13-23, 25-28.

Period of record: Maximum discharge, 5,360 ft<sup>3</sup>/s (152 m<sup>3</sup>/s) July 25, 1975 (gage height, 12.22 ft or 3.725 m), from rating curve extended above 1,400 ft<sup>3</sup>/s (39.6 m<sup>3</sup>/s) on basis of contracted-opening measurement of peak flow; no flow at times each year.

Maximum stage since 1900 occurred Apr. 25, 1922 (gage height and discharge unknown), from information by local residents. The second highest flood, about 13 ft (4.0 m), occurred Apr. 21, 1942 (discharge unknown), from information by local residents. Floods in 1926, 1935, 1949, and 1955, had stages slightly less than that of the July 25, 1975, flood from newspaper articles and local residents.

REMARKS.--Records fair above 20 ft<sup>3</sup>/s (0.57 m<sup>3</sup>/s) and good below except those for period of no gage-height record, which are poor. Flow is slightly affected by several small farm ponds located on tributaries above station. Low flow is sustained at times by effluent from industrial park 2.6 miles (4.2 km) upstream. Three recording rain gages are operated in basin above station.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976 MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.02	0	.37	.40	.13	.14	.22	1.4	14	.10	.05	5.3
2	.01	3.4	.19	.30	.17	.14	.21	1.1	5.0	.08	.04	7.7
3	0	.80	.09	.30	.16	.11	.19	.85	3.2	1.1	.03	19
4	0	.45	.08	.20	.11	.11	.35	.97	2.0	3.9	.02	.84
5	0	.23	.08	.20	.12	.08	.37	.26	2.1	.98	.02	.06
6	0	.19	.08	.20	.14	.04	.31	79	2.1	.57	.02	.02
7	0	.28	.08	.20	.14	.15	4.5	11	1.4	.33	1.3	.01
8	0	.24	.08	.10	.14	7.6	3.4	5.8	1.4	.24	.16	.01
9	0	.22	.08	.10	.14	2.2	.96	3.9	1.5	2.1	.06	.01
10	0	.22	.08	.10	.19	.55	.69	3.2	1.3	2.9	.02	.06
11	0	.41	.08	.10	.17	.72	.35	2.5	1.1	1.3	.01	.06
12	0	.54	.08	.10	.18	2.1	.25	2.5	.84	.68	.15	.06
13	0	.42	.08	.10	.17	.69	5.9	5.1	.62	.35	0	.06
14	0	.26	.08	.10	.10	.42	1.7	2.4	.60	1.1	0	.06
15	0	.15	.20	.10	.08	.29	.86	1.5	.60	2.0	0	.06
16	0	.11	.08	.40	.14	.22	17	1.2	.51	59	0	.06
17	0	.09	.20	.30	.63	.20	10	1.1	.35	19	0	.03
18	0	.08	.20	.20	.37	.17	25	.98	4.4	4.6	0	.35
19	0	.39	.10	.20	.26	.17	38	.98	24	2.0	0	5.6
20	0	1.2	.10	.10	.28	.19	29	.98	4.7	1.4	0	3.3
21	0	.73	.10	.10	1.7	.18	6.1	.98	1.7	.87	0	1.1
22	0	.30	.10	.10	.52	.12	3.1	.73	1.0	.73	0	.32
23	0	.20	.10	.10	.23	.08	2.1	.50	.97	.60	0	.28
24	0	.15	30	.30	.17	16	13	.45	.99	.42	.14	.26
25	0	.11	7.0	.25	.17	3.3	3.1	2.5	2.8	.31	0	.17
26	0	.11	4.0	.20	.17	2.0	1.7	3.7	1.1	.28	0	.12
27	0	.11	2.0	.19	.16	2.3	1.3	.90	.60	.31	0	.08
28	0	.13	.90	.17	.14	.47	3.0	.59	.37	.21	0	7.2
29	0	.50	.70	.14	.14	.51	7.6	.42	.25	.14	3.7	1.7
30	0	2.5	.50	.14	---	.31	2.6	5.3	.17	.10	1.9	.37
31	0	---	.40	.12	---	.22	---	207	---	.08	3.8	---
TOTAL	.03	14.52	48.21	5.61	7.22	41.78	182.86	375.53	81.67	107.78	11.42	54.25
MEAN	.001	.48	1.56	.18	.25	1.35	6.10	12.1	2.72	3.48	.37	1.81
MAX	.02	3.4	30	.40	1.7	16	38	207	24	59	3.8	19
MIN	0	0	.08	.10	.08	.04	.19	.42	.17	.08	0	.01
CFSM	0	.04	.13	.01	.02	.11	.50	.98	.22	.28	.03	.15
IN.	.00009	.04	.15	.02	.02	.13	.55	1.14	.25	.33	.03	.16
AC-FT	.06	29	96	11	14	83	363	745	162	214	23	108
(††)	.03	1.33	1.71	.13	.50	2.16	5.12	6.15	2.03	3.28	2.38	3.22
CAL YR 1975 TOTAL	2450.82			MEAN 6.71	MAX 718	MIN 0	CFSM .55	IN 7.41	AC-FT 4860	†† 30.58		
WTR YR 1976 TOTAL	930.88			MEAN 2.54	MAX 207	MIN 0	CFSM .21	IN 2.82	AC-FT 1850	†† 28.04		

PEAK DISCHARGE (BASE, 290 FT<sup>3</sup>/S).--May 31 (0100) 623 ft<sup>3</sup>/s (5.64 ft); July 16 (1645) 396 ft<sup>3</sup>/s (4.82 ft).

†† Weighted-mean rainfall, in inches, based on three rain gages.

NOTE.--No gage-height record Dec. 18 to Jan. 28.

MAXIMUM DISCHARGE AT CREST-STAGE PARTIAL-RECORD STATIONS, 1976 WATER YEAR

Station	Station name	Location	Drainage area (mi <sup>2</sup> )	Period of record	Annual maximum		
					Date	Gage height (feet)	Dis-charge (ft <sup>3</sup> /s)
08048550	Dry Branch at Blandin Street, Fort Worth, Tex. 1/	Lat 32°47'19", long 97°18'22", Tarrant County, at culvert on Blandin Street in north Fort Worth and 2.82 miles upstream from mouth.	1.08	1969-76	5-31-76	588.11	398
08048820	Little Fossil Creek at Interstate Highway 820, Fort Worth, Tex. 1/	Lat 32°50'22", long 97°19'20", Tarrant County, at culvert on south access road to Interstate Highway 820, 5.7 miles north of Tarrant County courthouse, Fort Worth, and 7.55 miles upstream from mouth.	5.64	1969-76	5-31-76	613.59	451

1/ Equipped with stage recorder.

F O R T A P L I N U R B A N H Y D R O L O G Y S T U D Y												
DAILY AND MONTHLY RAINFALL SUMMARY												
PERIOD : 1976 WATER YEAR												
G A G G E N U M B E R												
DATE	1-SC	2-SC	3-SC	1-ST	2-ST	1-D8	2-D8	1-LF	2-LF	3-LF		
OCT												
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.05	0.00		
23	0.05	0.07	0.06	0.06	0.06	0.00	0.00	0.00	0.00	0.00		
MTOT	0.05	0.07	0.06	0.06	0.06	0.00	0.00	0.04	0.05	0.00		
NOV												
2	1.06	1.01	1.29	0.42	1.01	0.85	1.55	0.45	0.55	0.84		
19	0.25	0.24	0.17	0.16	0.20	0.33	0.35	0.25	0.34	0.30		
23	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
29	0.47	0.47	0.40	0.50	0.46	0.41	0.60	0.63	0.35	0.25		
MTOT	1.76	1.71	1.86	1.48	1.67	1.59	2.50	1.33	1.24	1.39		
DEC												
5	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.04	0.00	0.00		
11	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00		
24	1.55	1.65	1.45	1.64	1.65	1.55	1.56	1.75	1.70	1.65		
25	0.00	0.00	0.00	0.00	0.00	0.08	0.09	0.00	0.00	0.00		
MTOT	1.55	1.65	1.53	1.64	1.65	1.66	1.60	1.79	1.70	1.65		
CIOT	29.89	29.97	29.04	31.10	30.14	32.16	32.52	27.97	29.52	33.99		
JAN												
15	0.02	0.04	0.00	0.05	0.05	0.05	0.05	0.06	0.06	0.04		
24	0.00	0.00	0.00	0.00	0.00	0.05	0.06	0.00	0.05	0.05		
31	0.00	0.00	0.00	0.00	0.00	0.05	0.03	0.03	0.05	0.05		
MTOT	0.02	0.04	0.00	0.05	0.05	0.15	0.14	0.09	0.16	0.14		
MTOT=MONTHLY TOTALS												
CIOT=CALENDAR YEAR TOTALS												

# F O R T W O R T H U R B A N H Y D R O L O G Y S T U D Y

## DAILY AND MONTHLY RAINFALL SUMMARY

PERIOD : 1976 WATER YEAR

### G A G E N U M B E R

DATE	1-SC	2-SC	3-SC	1-ST	2-ST	1-DR	2-DR	1-LF	2-LF	3-LF
FEB										
17	0.25	0.26	0.24	0.20	0.21	0.21	0.24	0.30	0.26	0.18
20	0.23	0.24	0.18	0.20	0.16	0.18	0.31	0.30	0.30	0.19
MTOT	0.45	0.50	0.42	0.40	0.37	0.39	0.55	0.60	0.56	0.37
MAR										
7	0.19	0.43	0.04	0.43	0.45	0.47	0.52	0.37	0.35	0.45
8	0.36	0.32	0.68	0.38	0.31	0.30	0.35	0.49	0.41	0.30
11	0.31	0.45	0.40	0.24	0.25	0.25	0.52	0.15	0.19	0.21
13	0.00	0.07	0.00	0.00	0.00	0.00	0.05	0.06	0.03	0.05
24	1.45	1.44	1.46	1.43	1.60	1.08	1.22	1.26	0.99	0.96
28	0.19	0.21	0.23	0.12	0.00	0.15	0.17	0.12	0.06	0.03
MTOT	2.73	2.97	2.81	2.57	2.61	2.25	2.54	2.45	2.03	2.00
APR										
3	0.05	0.04	0.02	0.03	0.05	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.05	0.05	0.05	0.06	0.07
7	0.40	0.50	0.52	0.50	0.58	0.52	0.65	0.60	0.54	0.53
12	0.46	0.41	0.30	0.19	0.25	0.07	0.20	0.31	0.31	0.29
13	0.29	0.23	0.31	0.30	0.34	0.30	0.34	0.15	0.16	0.29
15	0.69	0.72	0.55	0.74	0.74	0.72	0.65	0.70	0.60	0.65
16	0.05	0.03	0.04	0.03	0.03	0.03	0.04	0.09	0.20	0.06
17	0.49	0.74	0.78	0.84	0.84	0.86	0.88	0.81	0.66	1.02
18	1.14	1.92	1.15	1.55	1.55	0.56	0.78	0.49	0.41	0.43
19	2.76	2.79	2.24	2.14	2.14	0.88	1.04	1.05	0.60	0.89
20	0.02	0.02	0.02	0.04	0.04	0.05	0.12	0.04	0.24	0.05
21	0.00	0.00	0.00	0.05	0.05	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.02	0.02	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.15	0.05	0.05	0.06	0.05	0.07	0.07	0.05
24	0.00	0.00	0.00	0.00	0.00	0.20	0.10	0.35	0.47	0.40
28	0.47	0.50	0.41	0.48	0.56	0.47	0.65	0.50	0.45	0.41
29	0.16	0.11	0.15	0.17	0.15	0.03	0.05	0.05	0.05	0.05
MTOT	7.82	8.01	7.44	7.13	7.43	4.80	5.64	5.26	4.82	5.19
MTOT=MONTHLY TOTALS										



# PORT NORTHERN URBAN HYDROLOGY STUDY

PERIOD : 1976 WATER YEAR

## DAILY AND MONTHLY RAINFALL SUMMARY

### G G F N U M B E R

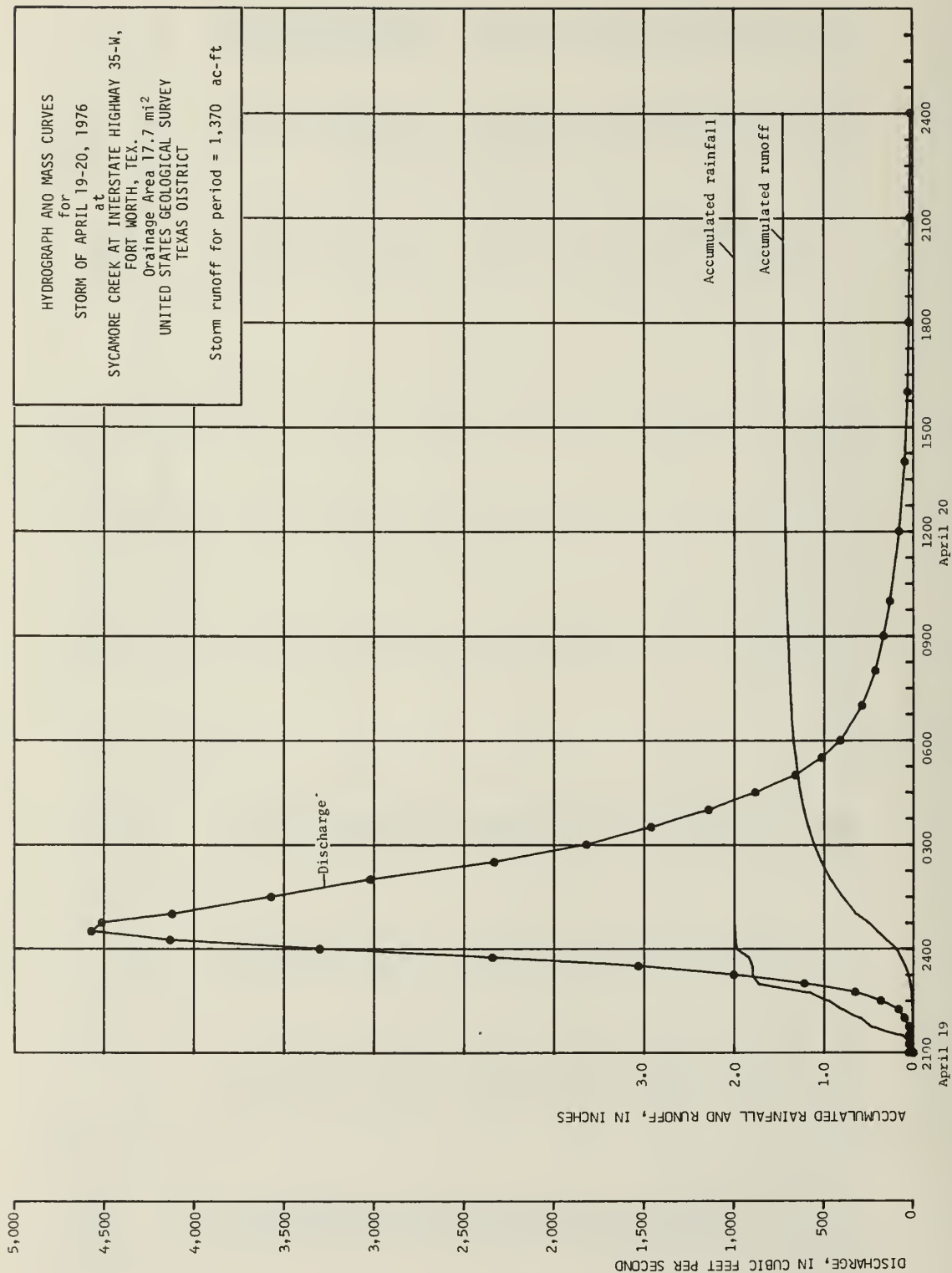
DATE	1-SC	2-SC	3-SC	1-ST	2-ST	1-DR	2-DR	1-LF	2-LF	3-LF
MAY										
5	0.38	0.45	0.43	0.62	0.61	1.17	1.04	1.35	1.30	1.11
6	0.22	0.15	0.14	0.15	0.17	0.23	0.12	1.03	0.90	0.49
7	0.06	0.09	0.05	0.05	0.06	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.03	0.02	0.05	0.04	0.00
10	0.24	0.15	0.05	0.11	0.06	0.00	0.00	0.00	0.00	0.00
12	0.23	0.23	0.13	0.13	0.12	0.12	0.47	0.28	0.16	0.19
13	0.14	0.21	0.07	0.09	0.12	0.17	0.19	0.12	0.15	0.10
23	0.13	0.22	0.23	0.05	0.07	0.00	0.00	0.00	0.00	0.00
25	3.44	2.71	1.26	1.43	1.30	0.50	0.76	0.50	0.50	0.50
26	0.03	0.00	0.14	0.15	0.10	0.00	0.00	0.00	0.00	0.00
30	0.62	0.75	0.69	0.80	0.75	2.00	2.20	2.54	2.70	2.65
31	0.33	0.80	0.57	0.86	1.15	0.77	0.79	0.62	0.55	0.73
MTOT	5.82	5.06	3.76	4.41	4.51	5.39	5.59	6.49	6.30	5.77
JUN										
6	0.65	0.08	0.00	0.05	0.04	0.00	0.00	0.20	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.10	0.09	0.00	0.00	0.00
14	0.00	0.09	0.52	0.88	0.99	0.45	0.81	0.45	0.55	0.97
19	0.38	0.86	0.51	0.48	0.50	0.95	0.82	1.00	1.10	0.75
24	0.10	0.08	0.04	0.00	0.00	0.15	0.14	0.23	0.16	0.53
25	0.04	0.03	0.03	0.09	0.08	0.02	0.02	0.00	0.02	0.02
MTOT	1.17	1.14	1.10	1.50	1.61	1.67	1.79	1.88	1.83	2.27
JUL										
3	1.72	1.52	1.52	1.31	1.33	0.70	0.86	0.60	0.50	0.69
4	0.00	0.00	0.00	0.04	0.05	0.10	0.40	0.00	0.00	0.00
5	0.00	0.09	0.20	0.15	0.06	0.00	0.00	0.00	0.00	0.00
9	0.05	0.05	0.05	0.05	0.05	0.29	0.55	0.55	0.63	0.23
10	0.02	0.05	0.00	0.05	0.08	0.04	0.05	0.03	0.00	0.00
13	0.00	0.00	0.10	0.00	0.00	0.12	0.00	0.41	0.05	0.05
14	0.11	0.13	0.18	0.20	0.26	0.13	0.14	0.05	0.03	0.09
15	0.00	0.00	0.10	0.00	0.02	0.07	0.03	0.05	0.05	0.04
16	0.04	0.00	0.00	0.04	0.04	1.24	1.31	1.42	2.99	1.60
17	1.24	1.00	0.78	0.65	0.70	0.04	0.15	0.00	0.00	0.00
25	0.46	0.35	0.19	0.21	0.10	0.00	0.30	0.12	0.05	0.00
MTOT	3.64	3.19	3.15	2.70	2.69	2.73	3.93	3.23	4.30	2.70
MTOT=MONTHLY TOTALS										

FORT WORTH URBAN HYDROLOGY STUDY												
DAILY AND MONTHLY RAINFALL SUMMARY												
PERIOD : 1976 WATER YEAR												
G A G E N U M B E R												
DATE	1-SC	2-SC	3-SC	1-ST	2-ST	1-OB	2-OB	1-LF	2-LF	3-LF		
AUG												
7	0.00	0.00	0.00	0.00	0.00	0.10	0.05	0.56	0.65	0.19		
24	0.00	0.00	0.00	0.12	0.05	0.66	0.56	0.20	0.16	0.31		
26	0.05	0.07	0.38	0.35	0.20	0.00	0.00	0.00	0.00	0.00		
28	0.13	0.10	0.21	0.86	0.97	0.00	0.00	0.50	0.40	0.06		
29	0.12	0.00	0.65	1.03	0.55	1.62	0.65	0.13	0.30	1.27		
30	0.00	0.12	0.07	0.17	0.08	0.04	0.00	0.19	0.07	0.00		
31	1.31	0.38	0.74	1.12	1.07	1.13	0.54	0.72	0.74	0.66		
MTOT	1.41	0.67	2.05	3.65	2.92	3.75	1.80	2.30	2.32	2.49		
SEPT												
1	1.24	1.11	1.35	0.93	1.01	0.36	0.44	0.56	0.56	0.48		
2	0.12	0.17	0.05	0.37	0.23	0.37	0.62	0.69	0.38	0.24		
3	0.96	1.23	1.12	0.53	0.50	0.85	0.22	0.36	0.54	0.91		
8	0.08	0.22	0.33	0.12	0.00	0.00	0.00	0.00	0.00	0.00		
9	0.00	0.00	0.00	0.16	0.15	0.00	0.00	0.00	0.00	0.00		
18	0.20	0.19	0.08	0.27	0.10	0.57	0.30	0.10	0.62	0.35		
19	1.42	1.20	1.46	1.87	1.83	0.80	0.80	0.38	0.41	0.63		
20	0.00	0.02	0.00	0.00	0.02	0.13	0.10	0.12	0.07	0.08		
27	0.00	0.18	0.00	0.00	0.00	0.05	0.00	0.04	0.03	0.02		
28	0.19	0.06	0.16	0.26	0.40	0.45	0.65	0.78	0.65	0.65		
MTOT	4.21	4.36	4.55	4.51	4.24	3.58	3.37	3.03	3.26	3.36		
MTOT	30.70	29.37	28.73	30.10	29.81	27.96	29.83	28.49	28.57	27.33		
MTOT=MONTHLY TOTALS												
WTOT=WEATHER YEAR TOTAL												



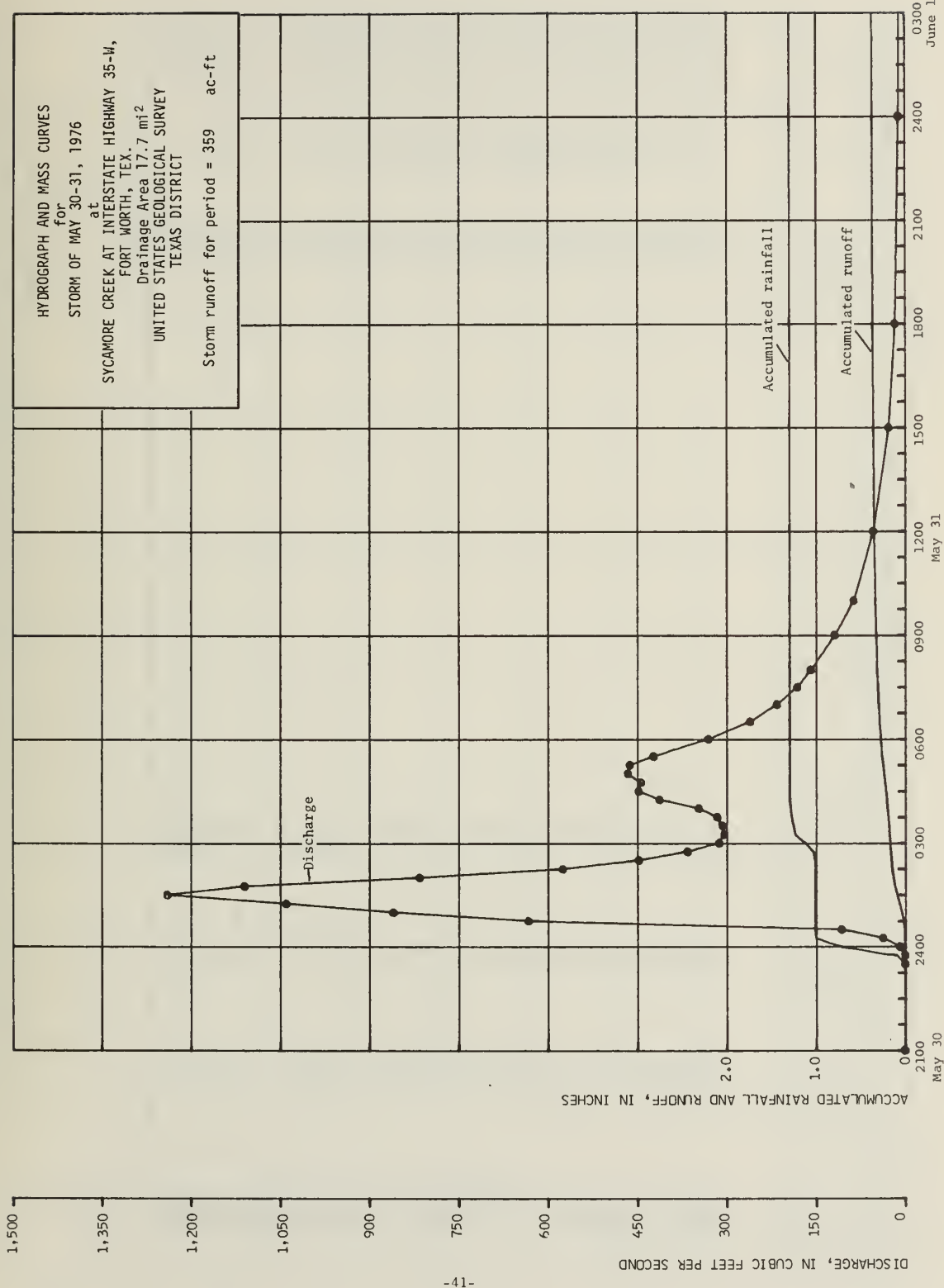


STATION NO. 08048520		STORM RAINFALL AND RUNOFF RECORD				1976 WATER YEAR			
SYCAMORE CREEK AT INTERSTATE HWY 35-W, FORT WORTH, TEX.		STORM OF APRIL 19-20, 1976				DISCHARGE: ACCUM.			
DATE & TIME		G A G E		N U M B E R		WEIGHTED		PRECIP.	
		3-SC				IN.		FT <sup>3</sup> /S	
		1-SC		2-SC		3-SC		IN.	
APR 20									
2400		2.26	1.96	1.60			1.99	13.0	1.4471



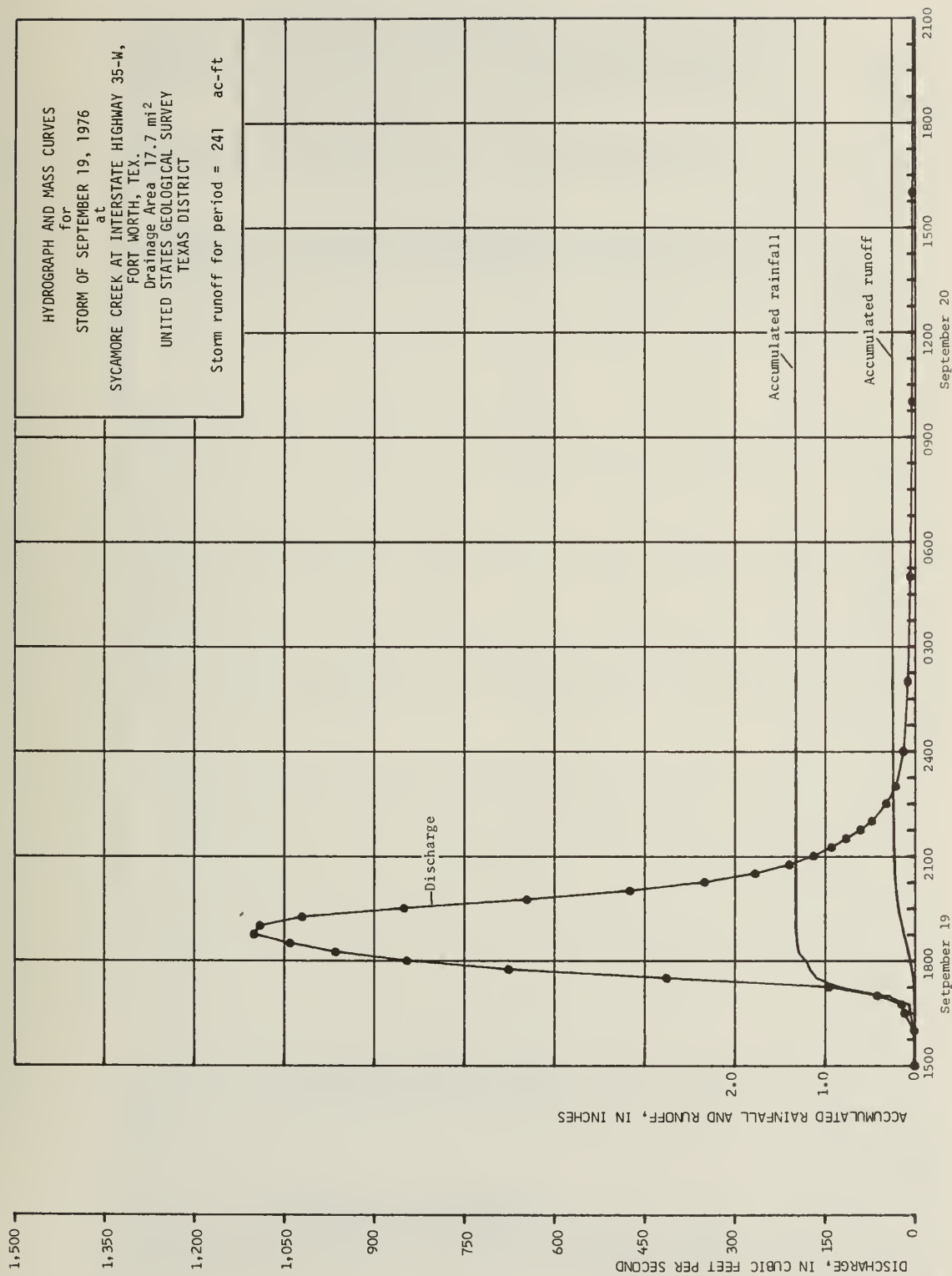
[illegible]









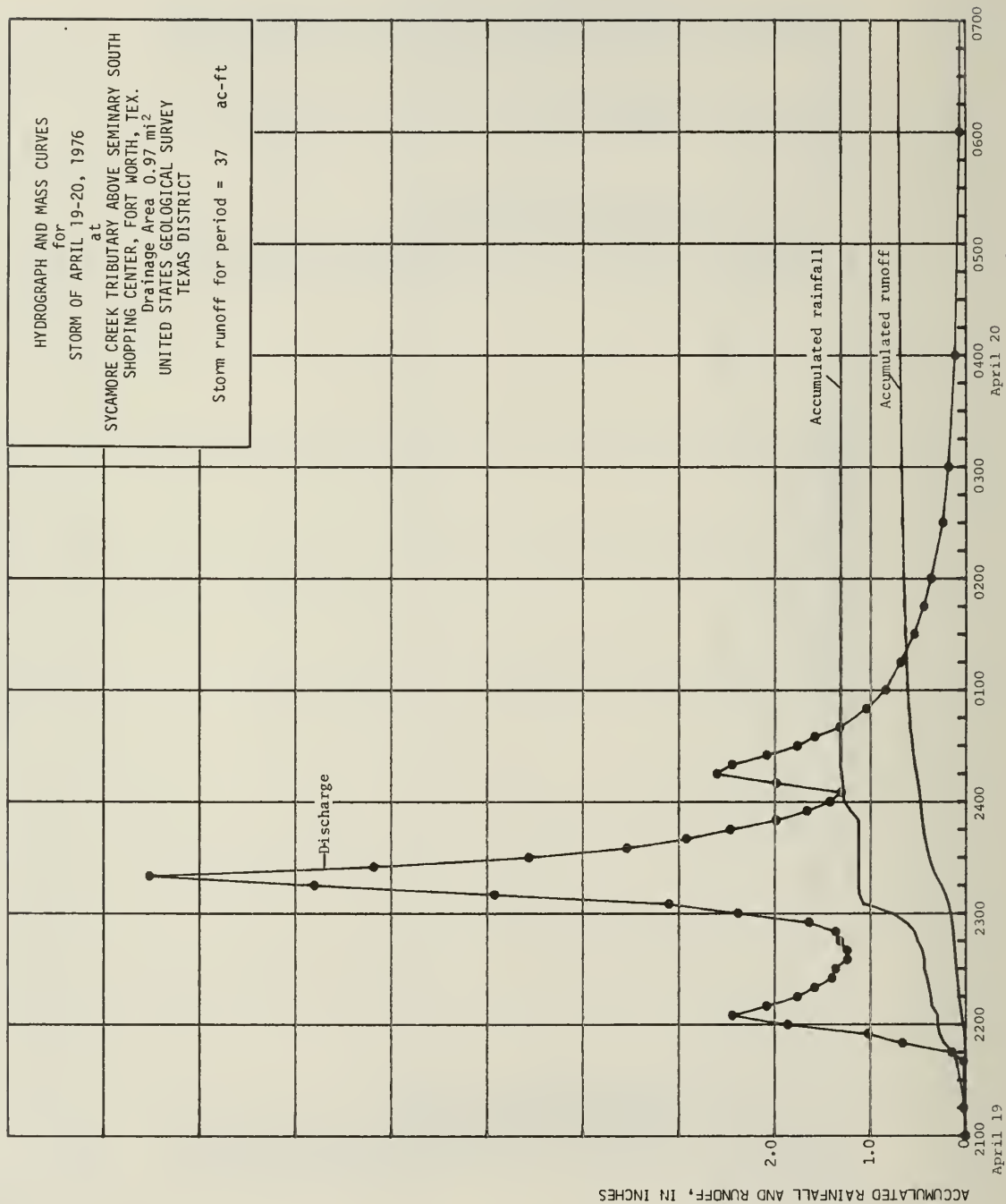


STORM RAINFALL AND RUNOFF RECORD									
1976 WATER YEAR									
SFA. NO. 08048530									
SYCAMORE CK TRIB ABV SEM. S. SHOP. CENTER, FT WORTH, TEX STORM OF APRIL 19-20, 1976									
DATE & TIME	2-ST	G A G E	N U M B E R	PRECIP.	ACCUM.	WEIGHTED	DISCHARGE: ACCUM.		
							IN	FT <sup>3</sup> /S	IN.
APR 19									
2115	0.0				0.0		1.0	0.0007	
2140	0.09				0.09		1.1	0.0012	
2145	0.13				0.13		7.1	0.0021	
2150	0.22				0.22		33.0	0.0065	
2155	0.27				0.27		51.0	0.0133	
2200	0.29				0.29		93.0	0.0257	
2205	0.29				0.29		122.0	0.0419	
2210	0.35				0.35		104.0	0.0558	
2215	0.36				0.36		88.0	0.0675	
2220	0.38				0.38		79.0	0.0780	
2225	0.40				0.40		70.0	0.0873	
2230	0.43				0.43		68.0	0.0964	
2235	0.43				0.43		62.0	0.1046	
2240	0.45				0.45		62.0	0.1129	
2245	0.50				0.50		66.0	0.1217	
2250	0.53				0.53		68.0	0.1307	
2255	0.62				0.62		82.0	0.1416	
2300	0.77				0.77		119.0	0.1575	
2305	1.07				1.07		155.0	0.1781	
2310	1.11				1.11		246.0	0.2109	
2315	1.12				1.12		340.0	0.2561	
2320	1.12				1.12		426.0	0.3128	
2325	1.12				1.12		309.0	0.3540	
2330	1.12				1.12		228.0	0.3843	
2335	1.12				1.12		177.0	0.4079	
2340	1.12				1.12		146.0	0.4273	
2345	1.12				1.12		123.0	0.4437	
2350	1.12				1.12		99.0	0.4569	
2355	1.20				1.20		83.0	0.4679	
2400	1.27				1.27		71.0	0.4750	
APR 20									
0000	1.27				1.27		71.0	0.4750	
0005	1.28				1.28		65.0	0.4860	
0010	1.29				1.29		99.0	0.4992	
0015	1.30				1.30		130.0	0.5165	
0020	1.31				1.31		122.0	0.5328	
0025	1.31				1.31		104.0	0.5466	
0030	1.31				1.31		88.0	0.5583	

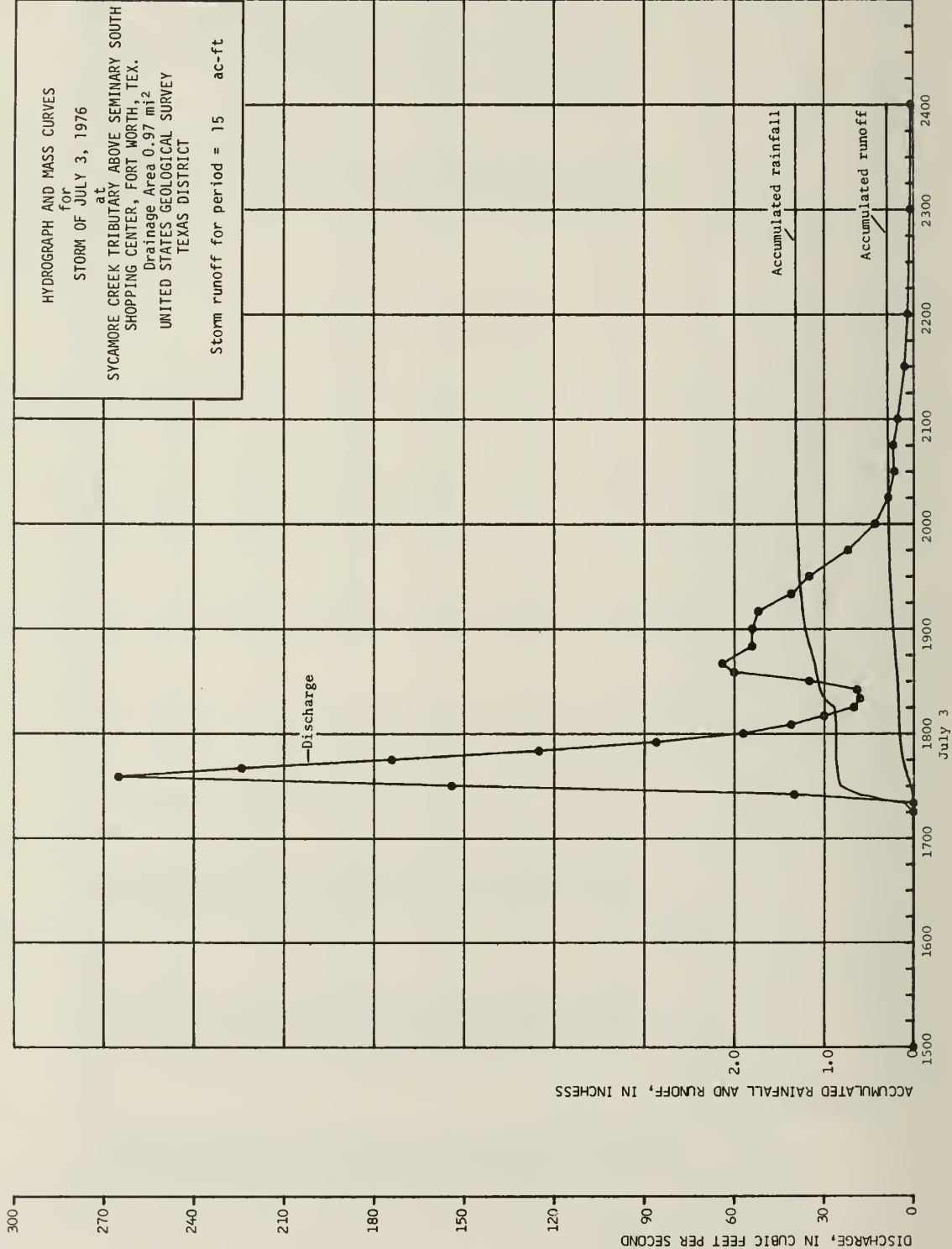
STA. NO. 08048530		STORM RAINFALL AND RUNOFF RECORD										1976 WATER YEAR			
SYCAMORE CK TRIB ARV SFM, S. SHOP. CENTER, FT WORTH, TEX		STORM OF APRIL 19-20, 1976										DISCHARGE: ACCUM.			
DATE & TIME		P-ST		GAGE		N U M B E R		PRECIP.		IN.		FT <sup>3</sup> /S		IN.	
APR 20															
0035	1.31									1.31			79.0		0.5688
0040	1.31									1.31			66.0		0.5820
0050	1.31									1.31			52.0		0.5959
0100	1.31									1.31			42.0		0.6098
0115	1.31									1.31			34.0		0.6234
0130	1.31									1.31			27.0		0.6342
0145	1.31									1.31			22.0		0.6430
0200	1.31									1.31			18.0		0.6538
0230	1.31									1.31			12.0		0.6634
0300	1.31									1.31			9.0		0.6741
0400	1.31									1.31			5.6		0.6876
0600	1.31									1.31			3.0		0.7019
1000	1.31									1.31			1.6		0.7096
1200	1.31									1.31			1.2		0.7173
1400	1.31									1.31			0.3		0.7201
2400	1.31									1.31			0.3		0.7216

DISCHARGE, IN CUBIC FEET PER SECOND

- 46 -







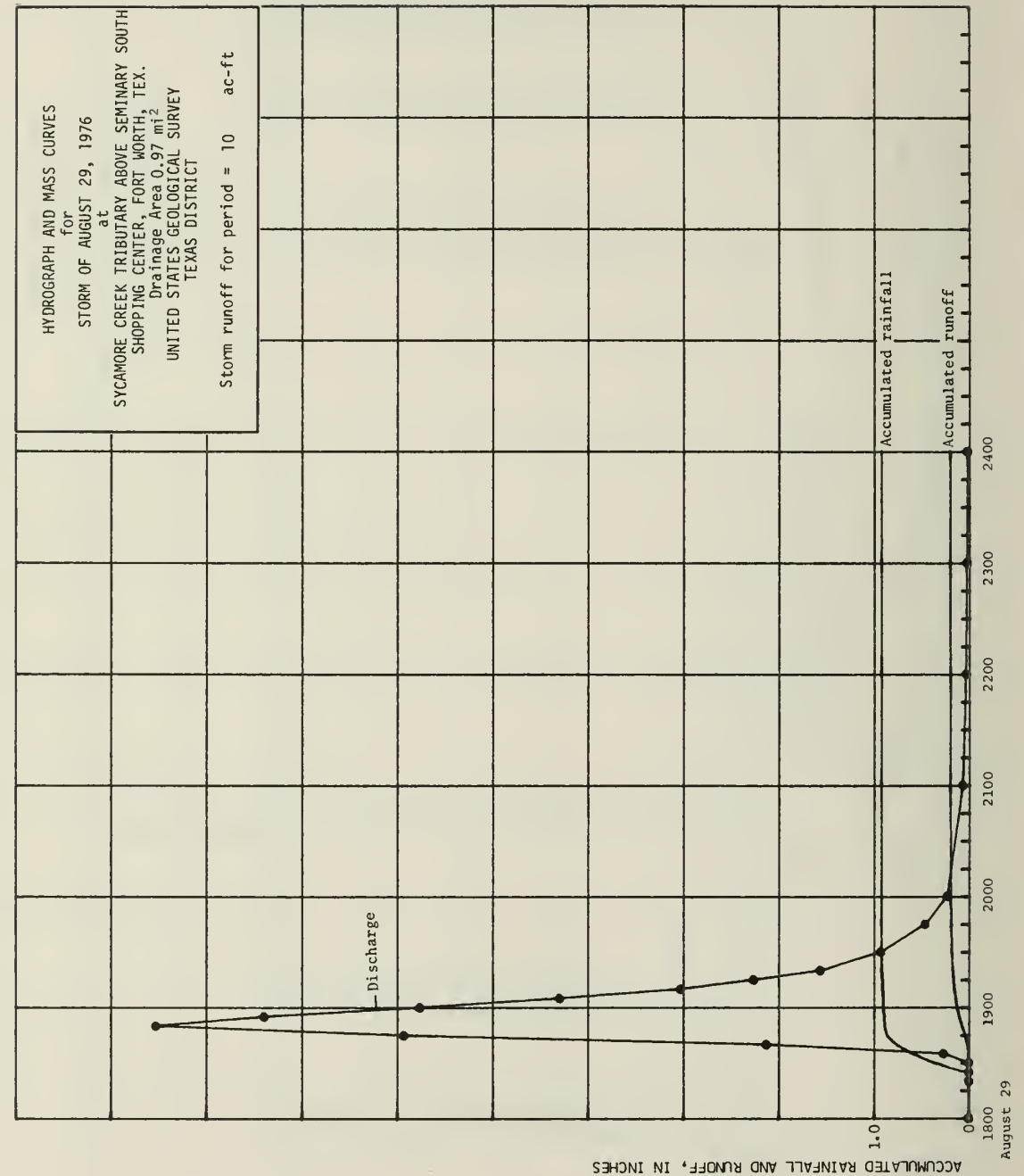


STORM RAINFALL AND RUNOFF RECORD									
1976 WATER YEAR									
STATION NO. 080-8537									
SYCAMORE CK TRIR ARV SEM. S. SHOP. CENTER, FT WORTH, TEX STORM OF AUGUST 29, 1976									
DATE & TIME									
PRECIP. IN. FT <sup>3</sup> /S IN. DISCHARGE: ACCUM. IN. RUNOFF									
1-ST 2-ST									
G A G E N U M B E R									
AUG 29									
0000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0014
1000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0029
1200	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0029
1225	0.02	0.03	0.03	0.03	0.03	0.02	0.02	0.1	0.0029
1300	0.30	0.24	0.27	0.27	0.27	0.35	0.35	0.1	0.0030
1335	0.60	0.60	0.60	0.60	0.60	0.59	0.59	0.2	0.0041
1400	0.87	0.39	0.39	0.39	0.39	0.76	0.76	0.60	0.0126
1445	0.90	0.48	0.48	0.48	0.48	0.87	0.87	1.70	0.0363
1500	1.00	0.51	0.51	0.51	0.51	0.89	0.89	2.56	0.0703
1555	1.00	0.52	0.52	0.52	0.52	0.89	0.89	2.22	0.0999
1600	1.01	0.53	0.53	0.53	0.53	0.90	0.90	1.73	0.1229
1605	1.01	0.53	0.53	0.53	0.53	0.90	0.90	1.29	0.1401
1710	1.02	0.53	0.53	0.53	0.53	0.91	0.91	0.91	0.1522
1715	1.02	0.54	0.54	0.54	0.54	0.91	0.91	0.60	0.1613
1820	1.03	0.54	0.54	0.54	0.54	0.92	0.92	0.47	0.1707
1930	1.03	0.55	0.55	0.55	0.55	0.92	0.92	0.20	0.1800
1945	1.03	0.55	0.55	0.55	0.55	0.92	0.92	0.14	0.1856
2000	1.03	0.55	0.55	0.55	0.55	0.92	0.92	0.71	0.1927
2100	1.03	0.55	0.55	0.55	0.55	0.92	0.92	2.1	0.1960
2200	1.03	0.55	0.55	0.55	0.55	0.92	0.92	1.1	0.1978
2300	1.03	0.55	0.55	0.55	0.55	0.92	0.92	0.8	0.1990
2400	1.03	0.55	0.55	0.55	0.55	0.92	0.92	0.6	0.1995

DISCHARGE, IN CUBIC FEET PER SECOND

300  
270  
240  
210  
180  
150  
120  
90  
60  
30  
0

-5-



STORM RAINFALL AND RUNOFF RECORD									
1976 WATER YEAR									
SYCAMORE CK TRIB AT INTERSTATE HWY 35-W, FT. WORTH, TEX. STORM OF APRIL 19-20, 1976									
DATE & TIME	2-ST	GAGE	NUMBER	PRECIP.	WEIGHTED	ACCUM.	DISCHARGE	ACCUM.	
				IN.	IN.		IN	IN	FT <sup>3</sup> /S
APR 19									IN.
2115	0.0			0.0			1.0	0.0005	
2140	0.03			0.09			1.0	0.0008	
2145	0.13			0.13			8.9	0.0017	
2150	0.22			0.22			33.0	0.0048	
2155	0.27			0.27			96.0	0.0140	
2200	0.29			0.29			180.0	0.0312	
2205	0.29			0.29			200.0	0.0504	
2210	0.35			0.35			170.0	0.0666	
2215	0.36			0.36			152.0	0.0812	
2220	0.34			0.38			129.0	0.0935	
2225	0.40			0.40			107.0	0.1037	
2230	0.43			0.43			97.0	0.1130	
2235	0.43			0.43			91.0	0.1217	
2240	0.45			0.45			84.0	0.1297	
2245	0.50			0.50			78.0	0.1372	
2250	0.53			0.53			87.0	0.1455	
2255	0.62			0.62			120.0	0.1570	
2300	0.77			0.77			164.0	0.1727	
2305	1.07			1.07			224.0	0.1941	
2310	1.11			1.11			344.0	0.2270	
2315	1.12			1.12			429.0	0.2680	
2320	1.12			1.12			594.0	0.3248	
2325	1.12			1.12			710.0	0.3927	
2330	1.12			1.12			576.0	0.4478	
2335	1.12			1.12			432.0	0.4891	
2340	1.12			1.12			261.0	0.5141	
2345	1.12			1.12			167.0	0.5301	
2350	1.12			1.12			140.0	0.5434	
2355	1.20			1.20			106.0	0.5536	
2400	1.27			1.27			86.0	0.5598	
APR 20									
0000	1.27			1.27			86.0	0.5598	
0005	1.24			1.28			121.0	0.5734	
0010	1.29			1.29			177.0	0.5903	
0015	1.31			1.30			168.0	0.6064	
0020	1.31			1.31			151.0	0.6208	
0025	1.31			1.31			131.0	0.6334	
0030	1.31			1.31			114.0	0.6443	

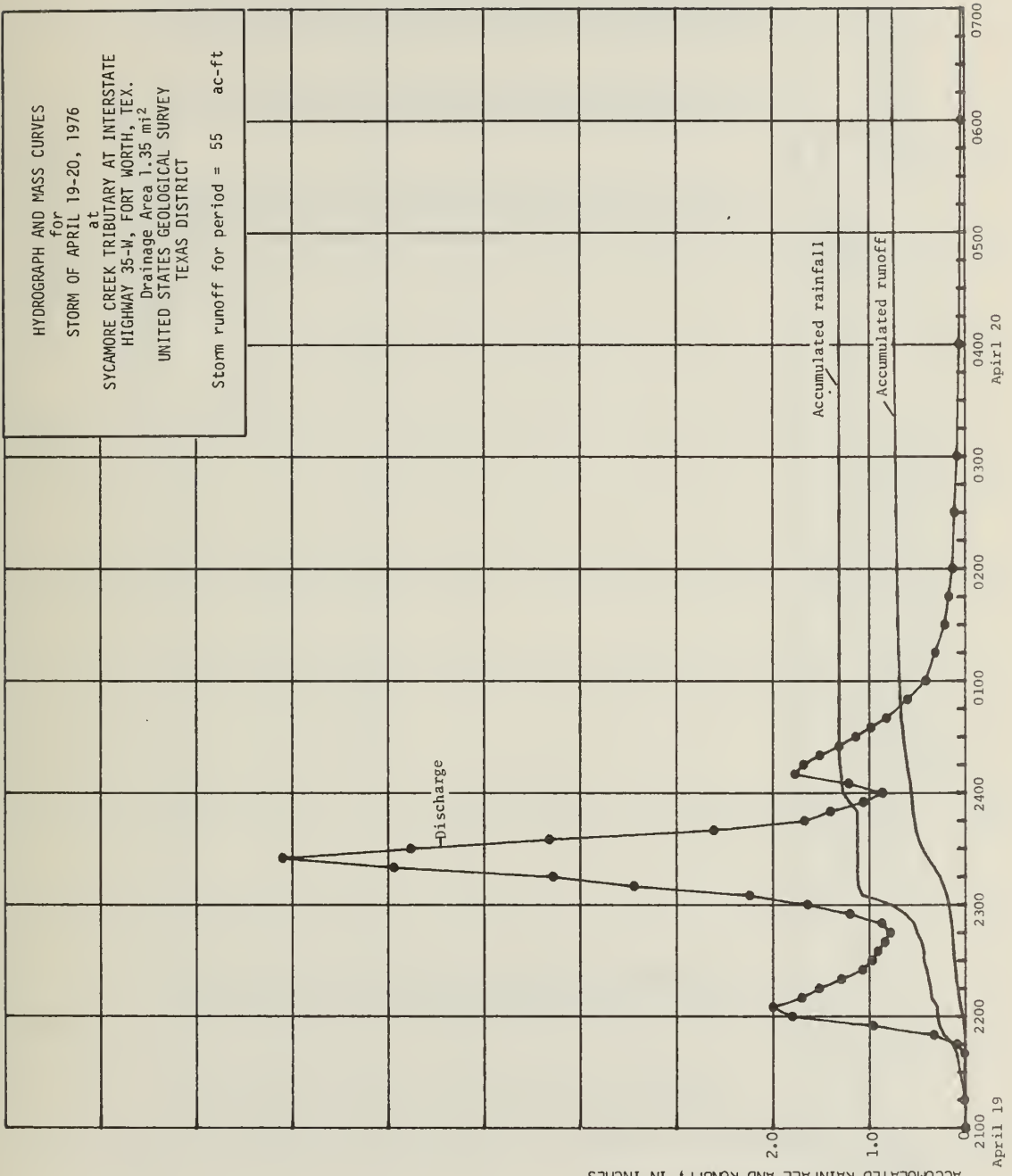
STORM RAINFALL AND RUNOFF RECORD									
1976 WATER YEAR									
SYCAMORE CK TRIB AT INTERSTATE HWY 35-W, FT. WORTH, TEX. STORM OF APRIL 19-20, 1976									
DATE & TIME	P-ST	GAGE	NUMBER	PRECIP.	ACCUM.	DISCHARGE	ACCUM.	PRECIP.	IN.
				IN.		IN		FT <sup>3</sup> /S	IN.
APR 20									
0035	1.31			1.31		98.0		0.6536	
0040	1.31			1.31		82.0		0.6654	
0050	1.31			1.31		60.0		0.6769	
0100	1.31			1.31		41.0		0.6867	
0115	1.31			1.31		31.0		0.6956	
0130	1.31			1.31		21.0		0.7016	
0145	1.31			1.31		17.0		0.7065	
0200	1.31			1.31		13.0		0.7121	
0230	1.31			1.31		11.0		0.7184	
0300	1.31			1.31		8.4		0.7256	
0400	1.31			1.31		5.8		0.7356	
0600	1.31			1.31		3.8		0.7487	
1000	1.31			1.31		1.9		0.7552	
1200	1.31			1.31		1.2		0.7608	
1800	1.31			1.31		0.5		0.7642	
2400	1.31			1.31		0.4		0.7656	

DISCHARGE, IN CUBIC FEET PER SECOND

1,000  
900  
800  
700  
600  
500  
400  
300  
200  
100  
0

-35-

ACCUMULATED RAINFALL AND RUNOFF, IN INCHES



HYDROGRAPH AND MASS CURVES  
for  
STORM OF APRIL 19-20, 1976  
at  
SYCAMORE CREEK TRIBUTARY AT INTERSTATE  
HIGHWAY 35-W, FORT WORTH, TEX.  
Drainage Area 1.35 mi<sup>2</sup>  
UNITED STATES GEOLOGICAL SURVEY  
TEXAS DISTRICT

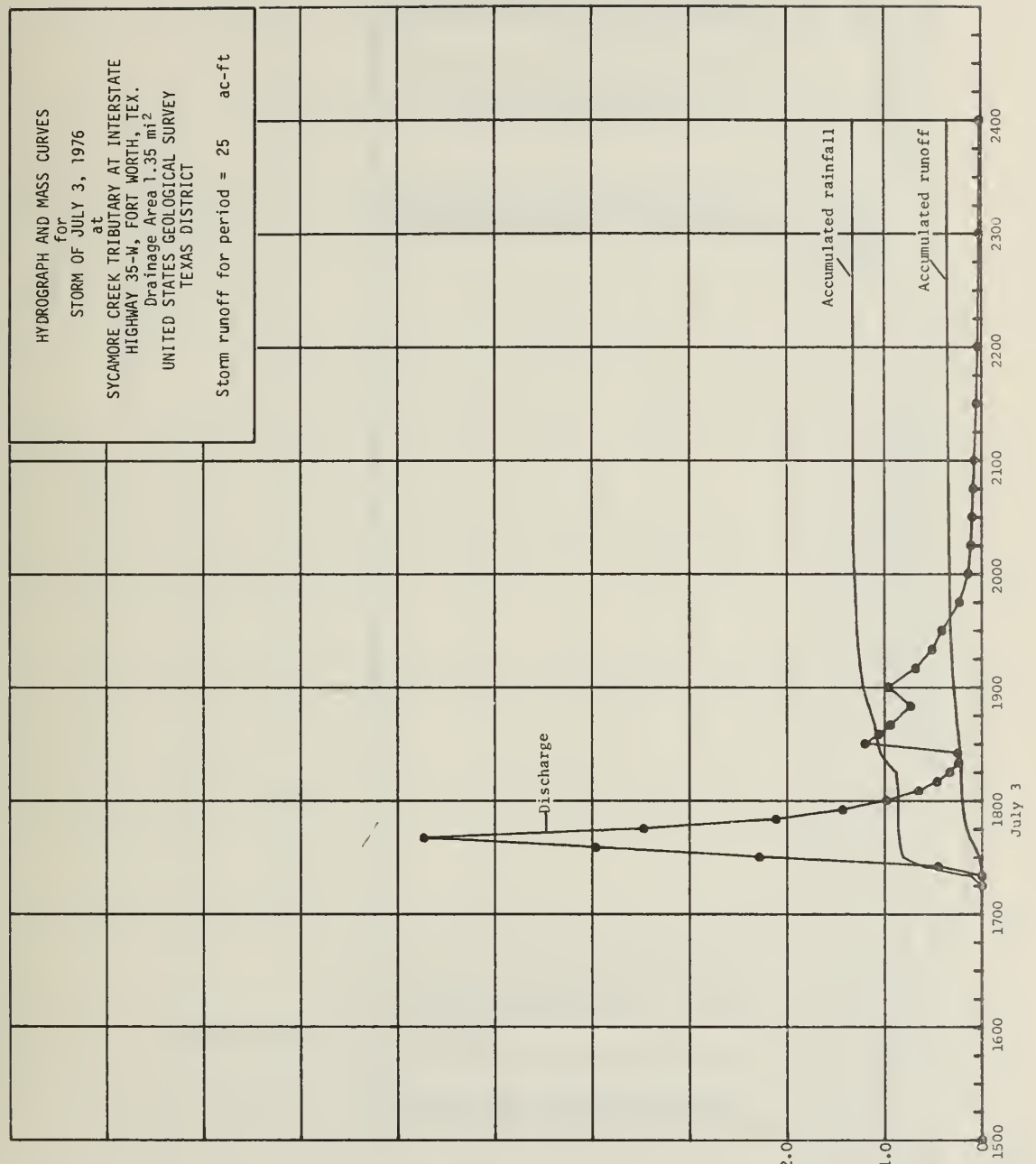
Storm runoff for period = 55 ac-ft

STA. NO. 0804854c		STORM RAINFALL AND RUNOFF RECORD									
		1976 WATER YEAR									
SYCAMORE CK TRIB AT INTERSTATE HWY 35-W, FT. WORTH, TEX.		STORM OF JULY 3, 1976									
DATE & TIME	1-ST	2-ST	G A G E	N U M B E R	PRECIP.	WEIGHTED	DISCHARGE: ACCUM.				
							IN	FT <sup>3</sup> /S	IN.		
JULY 3											
0000	0.0	0.0						0.0	0.1	0.0010	
0115	0.0	0.0						0.0	0.1	0.0020	
1720	0.09	0.14						0.11	0.1	0.0020	
1725	0.60	0.56						0.58	45.0	0.0063	
1730	0.93	0.79						0.81	228.0	0.0281	
1735	0.85	0.82						0.84	396.0	0.0660	
1740	0.86	0.84						0.85	573.0	0.1208	
1745	0.87	0.85						0.86	347.0	0.1540	
1750	0.87	0.85						0.86	211.0	0.1742	
1755	0.87	0.85						0.86	143.0	0.1878	
1800	0.87	0.85						0.86	98.0	0.1972	
1805	0.87	0.85						0.86	65.0	0.2034	
1810	0.88	0.86						0.87	46.0	0.2078	
1815	0.89	0.87						0.88	33.0	0.2110	
1820	1.02	0.92						0.98	24.0	0.2133	
1825	1.05	1.03						1.04	25.0	0.2157	
1830	1.07	1.06						1.07	120.0	0.2272	
1835	1.09	1.08						1.09	106.0	0.2373	
1840	1.11	1.09						1.10	94.0	0.2508	
1850	1.16	1.17						1.16	73.0	0.2648	
1900	1.21	1.23						1.22	96.0	0.2831	
1910	1.23	1.27						1.25	68.0	0.2961	
1920	1.25	1.24						1.27	51.0	0.3059	
1930	1.27	1.30						1.28	41.0	0.3157	
1945	1.28	1.31						1.29	23.0	0.3223	
2000	1.30	1.32						1.31	14.0	0.3263	
2015	1.31	1.33						1.32	11.0	0.3295	
2030	1.31	1.33						1.32	9.8	0.3323	
2045	1.31	1.33						1.32	8.6	0.3347	
2100	1.31	1.33						1.32	7.5	0.3380	
2130	1.31	1.33						1.32	5.4	0.3411	
2200	1.31	1.33						1.32	4.0	0.3445	
2300	1.31	1.33						1.32	2.5	0.3474	
2400	1.31	1.33						1.32	1.8	0.3484	



DISCHARGE, IN CUBIC FEET PER SECOND

ACCUMULATED RAINFALL AND RUNOFF, IN INCHES



HYDROGRAPH AND MASS CURVES

for  
STORM OF JULY 3, 1976  
at

SYCAMORE CREEK TRIBUTARY AT INTERSTATE  
HIGHWAY 35-W, FORT WORTH, TEX.

Drainage Area 1.35 mi<sup>2</sup>

UNITED STATES GEOLOGICAL SURVEY  
TEXAS DISTRICT

Storm runoff for period = 25 ac-ft

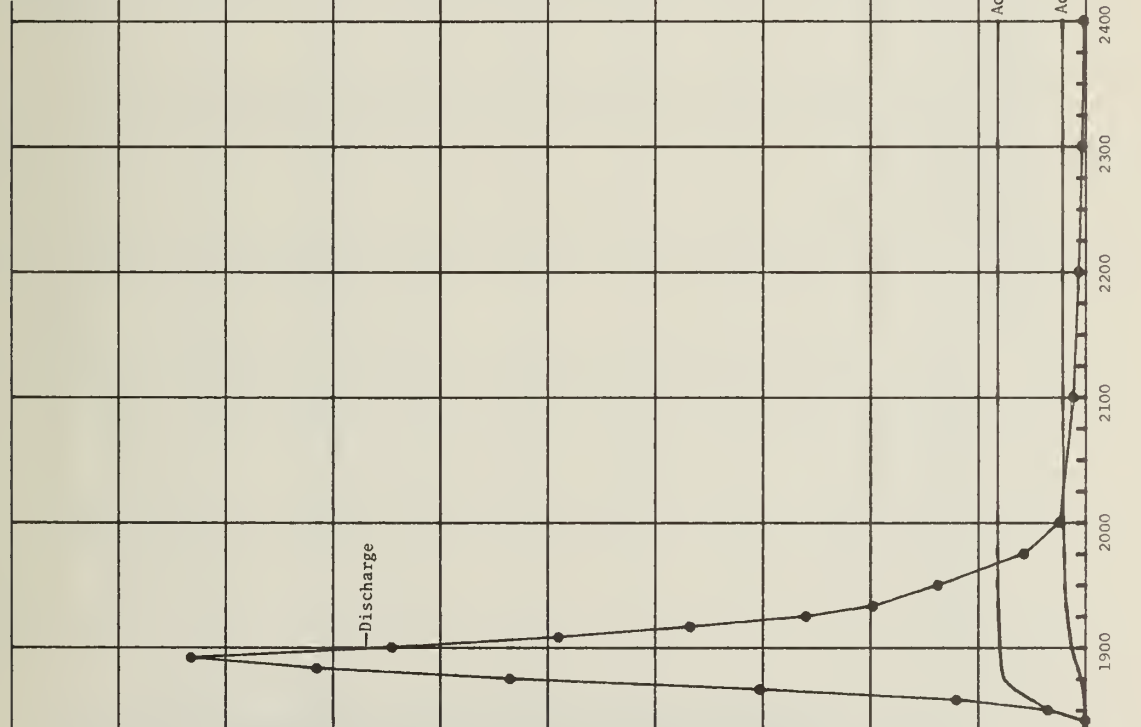


DISCHARGE, IN CUBIC FEET PER SECOND

400  
360  
320  
280  
240  
200  
160  
120  
80  
40  
0

ACCUMULATED RAINFALL AND RUNOFF, IN INCHES

1.0  
0.8  
0.6  
0.4  
0.2  
0



HYDROGRAPH AND MASS CURVES  
for  
STORM OF AUGUST 29, 1976  
at  
SYCAMORE CREEK TRIBUTARY AT INTERSTATE  
HIGHWAY 35-W, FORT WORTH, TEX.  
Drainage Area 1.35 mi<sup>2</sup>  
UNITED STATES GEOLOGICAL SURVEY  
TEXAS DISTRICT

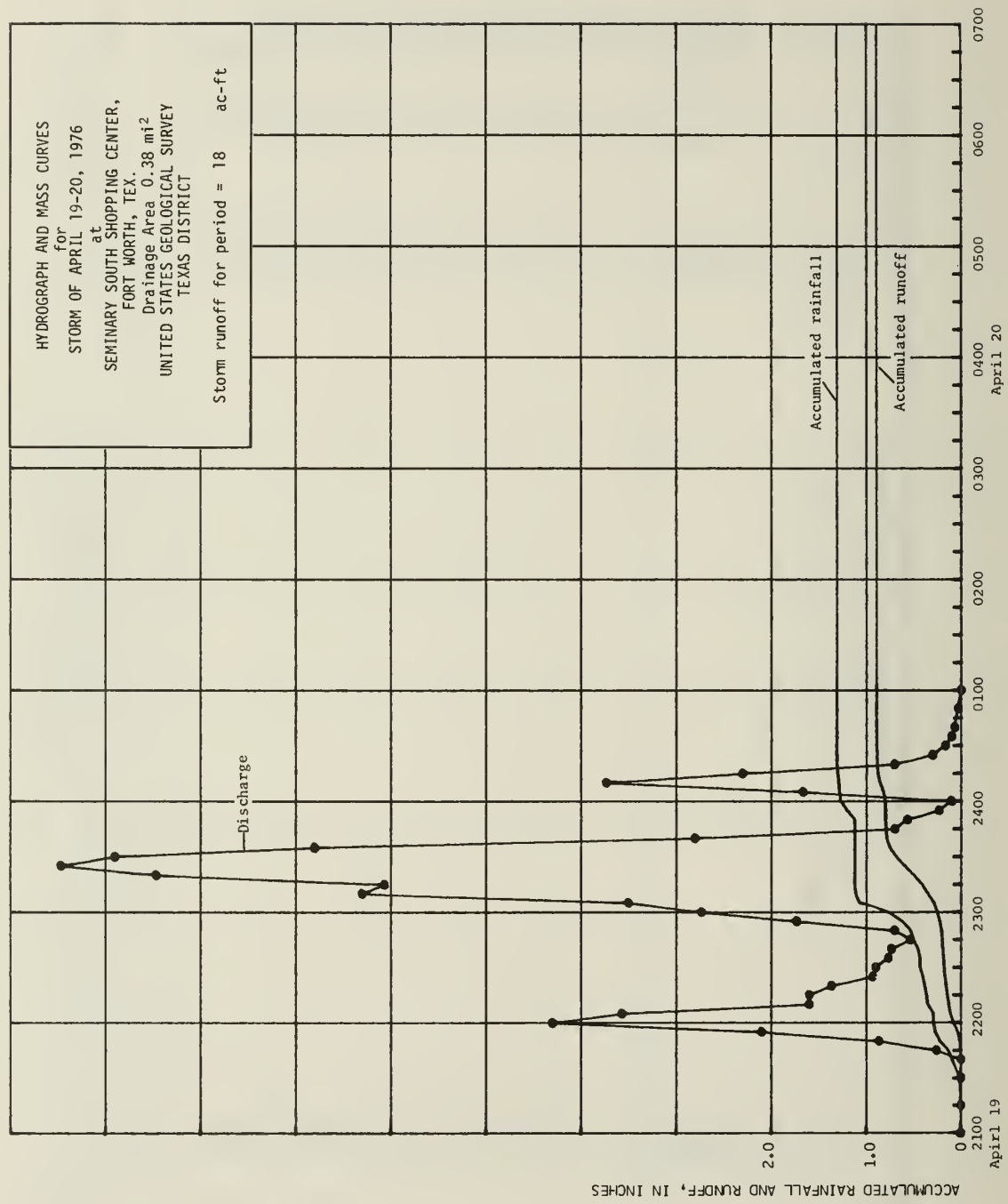
Storm runoff for period = 16 ac-ft

STORM RAINFALL AND RUNOFF RECORD									
STA. NO.	1976 WATER YEAR								
EST. OF RUNOFF FROM SEM. S. SHOP. CENTER, FT WORTH, TEX.	STORM OF APRIL 19-20, 1976								
DATE & TIME	2-ST	GAGE	N U M B E R	PRECIP.	ACCUM.	DISCHARGE:	IN	FT <sup>3</sup> /S	IN.
				IN.	IN.	IN			
APR 19									
0000	0.0			0.0			0.0		0.0
2115	0.0			0.0			0.0		0.0
2130	0.01			0.01			0.0		0.0
2140	0.09			0.09			0.0		0.0
2145	0.13			0.13			7.8		0.0027
2150	0.22			0.22			26.0		0.0115
2155	0.27			0.27			63.0		0.0329
2200	0.29			0.29			129.0		0.0767
2205	0.29			0.29			107.0		0.1131
2210	0.35			0.35			48.0		0.1294
2215	0.36			0.36			48.0		0.1457
2220	0.38			0.38			41.0		0.1596
2225	0.40			0.40			28.0		0.1692
2230	0.43			0.43			27.0		0.1783
2235	0.43			0.43			23.0		0.1862
2240	0.45			0.45			22.0		0.1936
2245	0.50			0.50			16.0		0.1991
2250	0.53			0.53			21.0		0.2062
2255	0.62			0.62			52.0		0.2239
2300	0.77			0.77			82.0		0.2517
2305	1.07			1.07			105.0		0.2874
2310	1.11			1.11			189.0		0.3516
2315	1.12			1.12			182.0		0.4135
2320	1.12			1.12			254.0		0.4998
2325	1.12			1.12			284.0		0.5963
2330	1.12			1.12			267.0		0.6871
2335	1.12			1.12			204.0		0.7564
2340	1.12			1.12			84.0		0.7849
2345	1.12			1.12			21.0		0.7921
2350	1.12			1.12			17.0		0.7978
2355	1.20			1.20			7.0		0.8002
2400	1.27			1.27			3.0		0.8010
APR 20									
0000	1.27			1.27			3.0		0.8010
0005	1.28			1.28			50.0		0.8182
0010	1.29			1.29			112.0		0.8563
0015	1.30			1.30			69.0		0.8797
0020	1.31			1.31			21.0		0.8869
0025	1.31			1.31			9.0		0.8899
0030	1.31			1.31			5.0		0.8916



DISCHARGE, IN CUBIC FEET PER SECOND

300  
270  
240  
210  
180  
150  
120  
80  
60  
30  
0





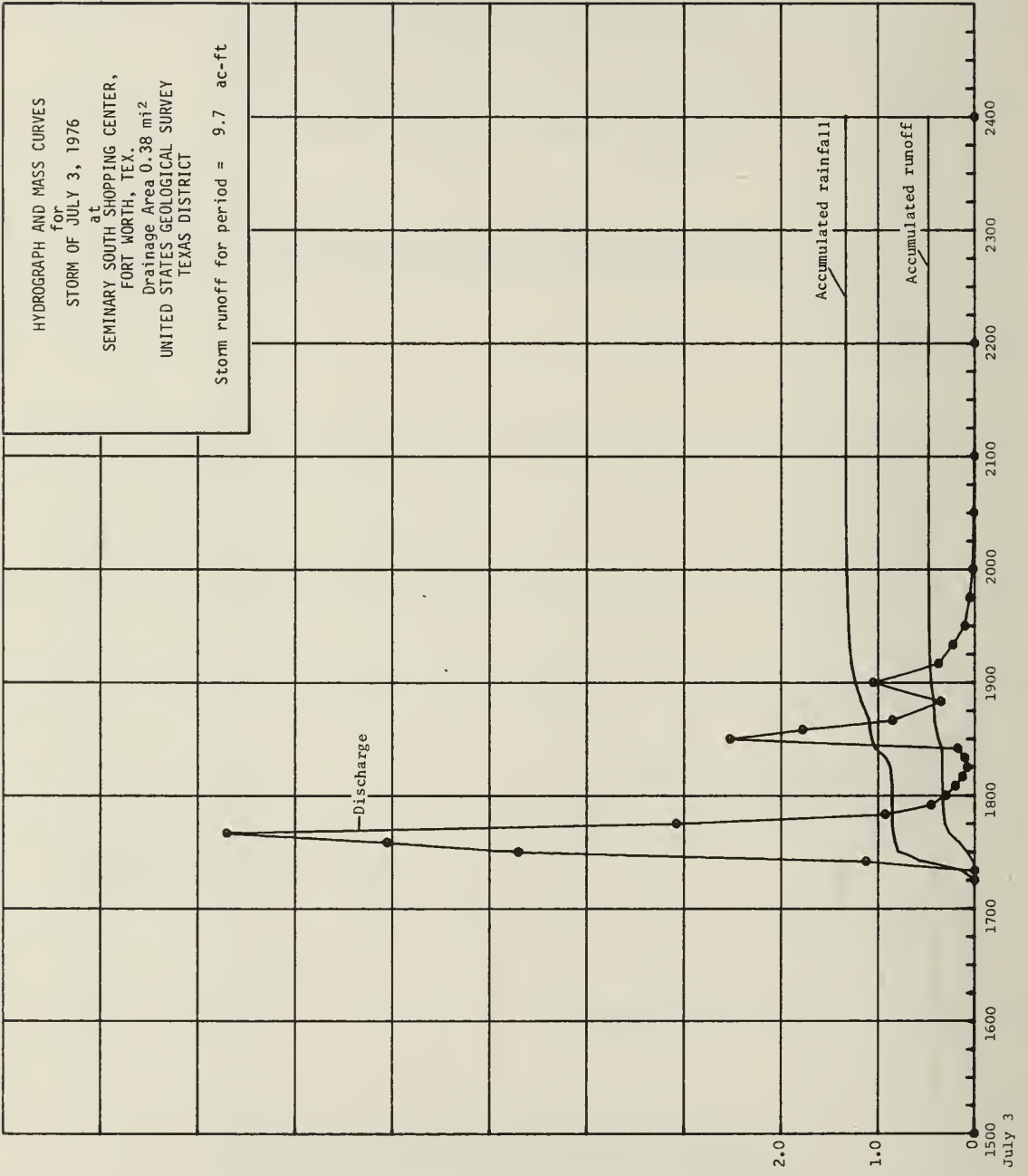
STORM RAINFALL AND RUNOFF RECORD									
1976 WATER YEAR									
STA. NO.	STORM OF JULY 3, 1976								
EST. OF RUNOFF FROM SEM. S. SHOP. CENTER, FT WORTH, TEX.									
DATE & TIME	2-ST	G A G E	N U M B E R	WEIGHTED	ACCUM.		DISCHARGE:		ACCUM.
					PRECIP.	IN.	IN.	RUNOFF	
FT <sup>3</sup> /S									
IN.									
JULY 3									
0000	0.0					0.0		0.0	0.0
1715	0.0					0.0		0.0	0.0
1720	0.14					0.14		0.0	0.0
1725	0.56					0.56		45.0	0.0153
1730	0.79					0.79		188.0	0.0792
1735	0.82					0.82		242.0	0.1614
1740	0.84					0.84		308.0	0.2661
1745	0.85					0.85		123.0	0.3079
1750	0.85					0.85		37.0	0.3205
1755	0.85					0.85		18.0	0.3266
1800	0.85					0.85		12.0	0.3306
1805	0.85					0.85		8.0	0.3334
1810	0.86					0.86		5.0	0.3351
1815	0.87					0.87		3.0	0.3361
1820	0.92					0.92		4.0	0.3374
1825	1.03					1.03		7.0	0.3398
1830	1.06					1.06		101.0	0.3741
1835	1.04					1.08		71.0	0.3983
1840	1.09					1.09		34.0	0.4156
1850	1.17					1.17		14.0	0.4251
1900	1.23					1.23		42.0	0.4537
1910	1.27					1.27		15.0	0.4639
1920	1.29					1.29		9.0	0.4700
1930	1.30					1.30		4.0	0.4734
1945	1.31					1.31		2.0	0.4754
2000	1.32					1.32		0.8	0.4766
2030	1.33					1.33		0.3	0.4772
2100	1.33					1.33		0.1	0.4776
2200	1.33					1.33		0.0	0.4776
2400	1.33					1.33		0.0	0.4776

DISCHARGE, IN CUBIC FEET PER SECOND

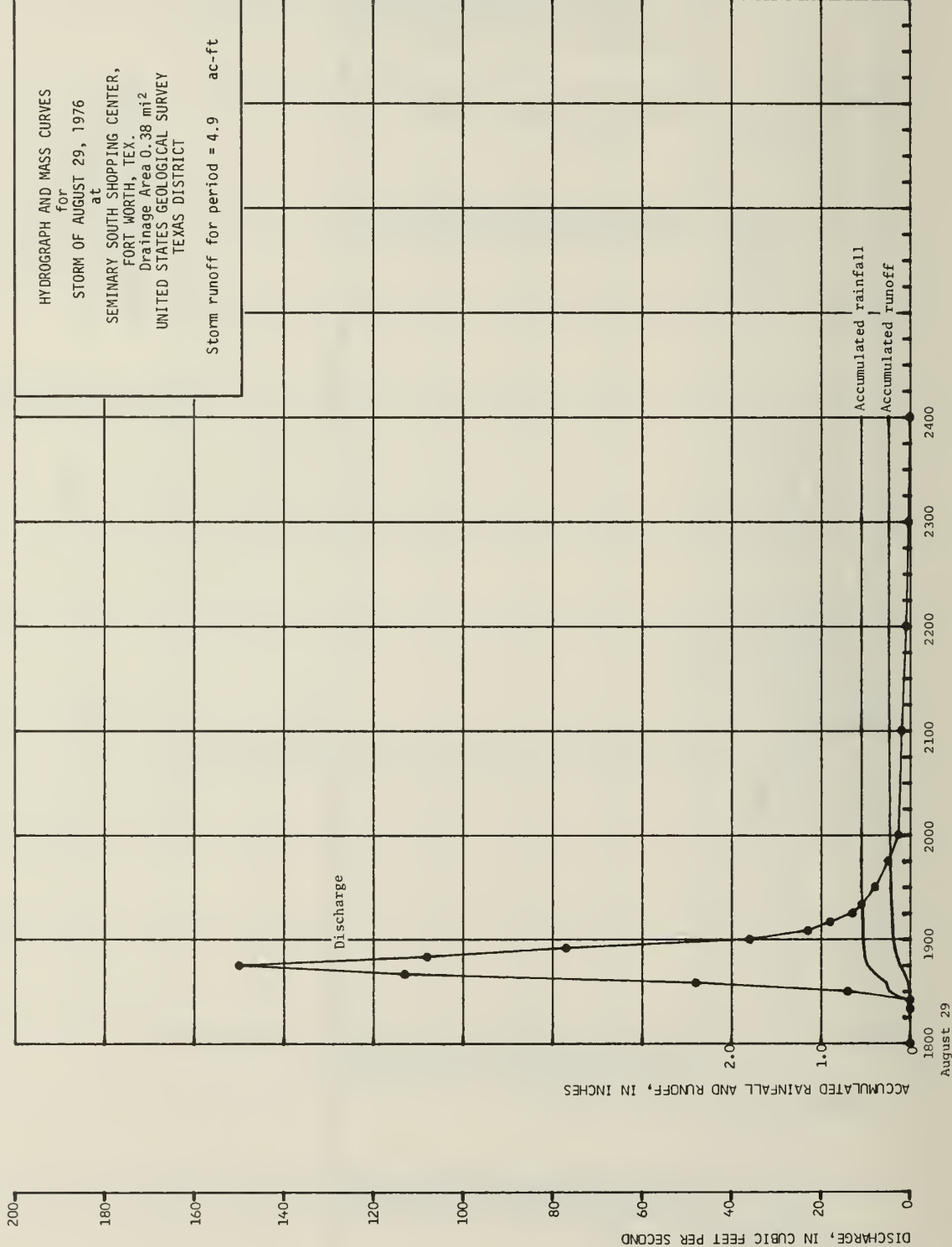
400  
360  
320  
280  
240  
200  
160  
120  
80  
40  
0

ACCUMULATED RAINFALL AND RUNOFF, IN INCHES

July 3



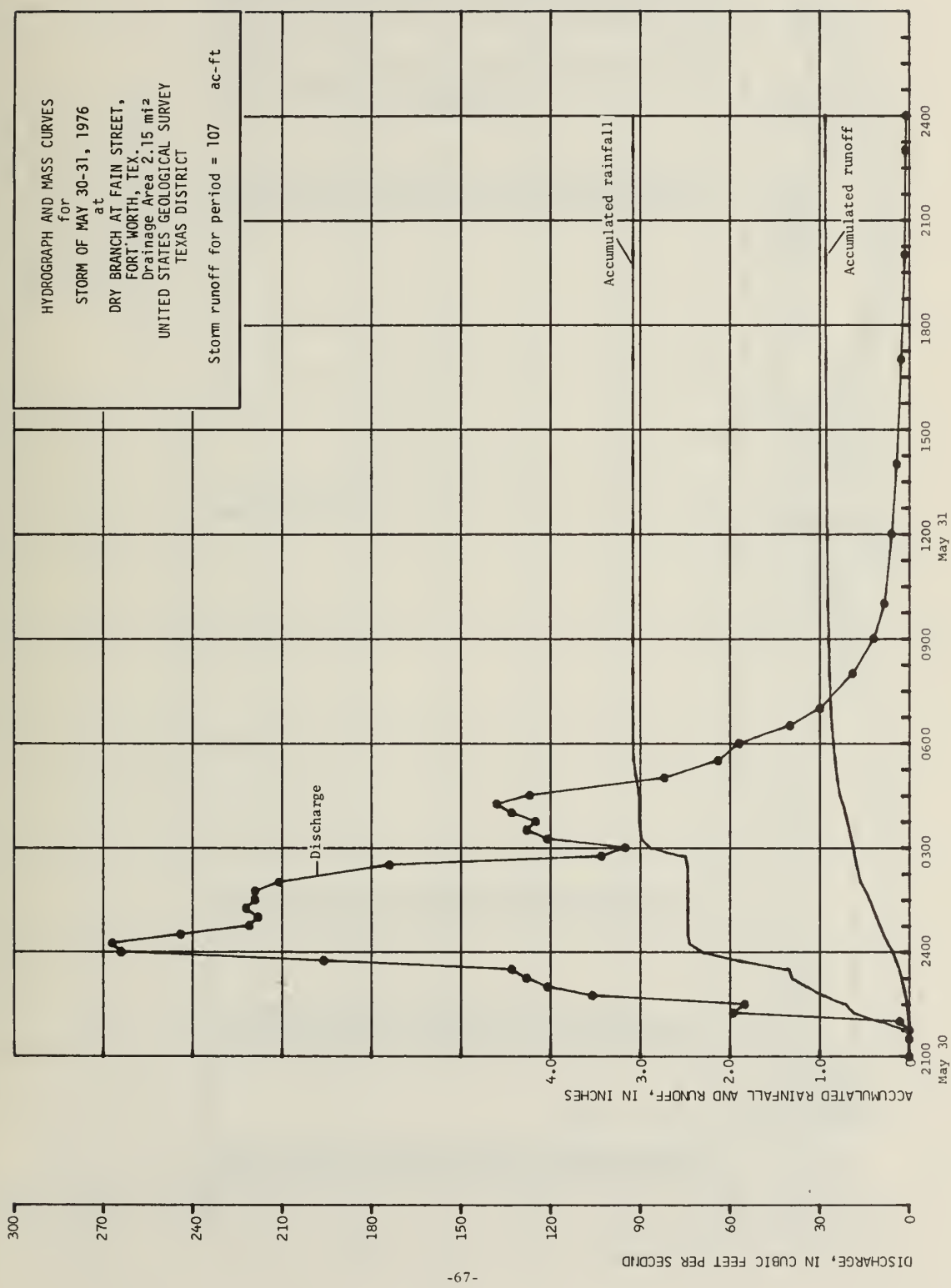
STORM PAINFALL AND RUNOFF RECORD										1976 WATER YEAR				
STA. NO.														
EST. OF RUNOFF FROM SFM. S. SHOP. CENTER, FT WORTH, TEX. STORM OF AUGUST 29, 1976										DISCHARGE: ACCUM. IN. RUNOFF				
DATE & TIME	P-ST	G	A	G	E	N	U	M	B	PRECIP. IN.	ACCUM. WEIGHTED IN.	FT <sup>3</sup> /S	IN.	
AUG 29														
0000	0.0									0.0			0.0	
1820	0.0									0.0			0.0	
1825	0.03									0.03			0.0	
1830	0.24									0.24			0.0048	
1835	0.27									0.27			0.0211	
1840	0.39									0.39			0.0595	
1845	0.48									0.48			0.1104	
1850	0.51									0.51			0.1471	
1855	0.52									0.52			0.1733	
1900	0.53									0.53			0.1855	
1905	0.53									0.53			0.1934	
1910	0.53									0.53			0.1995	
1915	0.54									0.54			0.2039	
1920	0.54									0.54			0.2095	
1930	0.55									0.55			0.2163	
1945	0.55									0.55			0.2214	
2000	0.55									0.55			0.2283	
2100	0.55									0.55			0.2364	
2200	0.55									0.55			0.2405	
2300	0.55									0.55			0.2425	
2400	0.55									0.55			0.2428	



STORM RAINFALL AND RUNOFF RECORD									
1976 WATER YEAR									
STORM OF MAY 30-31, 1976									
DRY BRANCH AT FAIR STREET, FORT WORTH, TEX.									
G A G E N U M B E R									
WEIGHTED									
PRECIP.									
IN.									
FT <sup>3</sup> /S									
IN.									
DISCHARGE: ACCUM.									
RUNOFF									
DATE & TIME									
1-D4									
2-D8									
G A G E									
N U M B E R									
WEIGHTED									
PRECIP.									
IN.									
FT <sup>3</sup> /S									
IN.									
DISCHARGE: ACCUM.									
RUNOFF									
DATE & TIME									
1-D4									
2-D8									
G A G E									
N U M B E R									
WEIGHTED									
PRECIP.									
IN.									
FT <sup>3</sup> /S									
IN.									
DISCHARGE: ACCUM.									
RUNOFF									
DATE & TIME									
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2-D8									
G A G E									
N U M B E R									
WEIGHTED									
PRECIP.									
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FT <sup>3</sup> /S									
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DISCHARGE: ACCUM.									
RUNOFF									
DATE & TIME									
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PRECIP.									
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FT <sup>3</sup> /S									
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DISCHARGE: ACCUM.									
RUNOFF									
DATE & TIME									
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DISCHARGE: ACCUM.									
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DISCHARGE: ACCUM.									
RUNOFF									
DATE & TIME									
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WEIGHTED									
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FT <sup>3</sup> /S									
IN.									
DISCHARGE: ACCUM.									
RUNOFF									
DATE & TIME									
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N U M B E R									
WEIGHTED									
PRECIP.									
IN.									
FT <sup>3</sup> /S									
IN.									
DISCHARGE: ACCUM.									
RUNOFF									
DATE & TIME									
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G A G E									
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WEIGHTED									
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FT <sup>3</sup> /S									
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DISCHARGE: ACCUM.									
RUNOFF									
DATE & TIME									
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G A G E									
N U M B E R									
WEIGHTED									
PRECIP.									
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FT <sup>3</sup> /S									
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DISCHARGE: ACCUM.									
RUNOFF									
DATE & TIME									
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DISCHARGE: ACCUM.									
RUNOFF									
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WEIGHTED									
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DISCHARGE: ACCUM.									
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DISCHARGE: ACCUM.									
RUNOFF									
DATE & TIME									
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N U M B E R									
WEIGHTED									
PRECIP.									
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DISCHARGE: ACCUM.									
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DISCHARGE: ACCUM.									
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WEIGHTED									
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DISCHARGE: ACCUM.									
RUNOFF									
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WEIGHTED									
PRECIP.									
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FT <sup>3</sup> /S									
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DISCHARGE: ACCUM.									
RUNOFF									
DATE & TIME									
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2-D8									
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N U M B E R									
WEIGHTED									
PRECIP.									
IN.									
FT <sup>3</sup> /S									
IN.									
DISCHARGE: ACCUM.									
RUNOFF									
DATE & TIME									
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G A G E									
N U M B E R									
WEIGHTED									
PRECIP.									
IN.									
FT <sup>3</sup> /S									
IN.									
DISCHARGE: ACCUM.									
RUNOFF									
DATE & TIME									
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N U M B E R									
WEIGHTED									
PRECIP.									
IN.									
FT <sup>3</sup> /S									
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DISCHARGE: ACCUM.									
RUNOFF									
DATE & TIME									
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G A G E									
N U M B E R									
WEIGHTED									
PRECIP.									
IN.									
FT <sup>3</sup> /S									
IN.									
DISCHARGE: ACCUM.									
RUNOFF									
DATE & TIME									
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2-D8									
G A G E									
N U M B E R									
WEIGHTED									
PRECIP.									
IN.									
FT <sup>3</sup> /S									
IN.									
DISCHARGE: ACCUM.									
RUNOFF									
DATE & TIME									
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2-D8									
G A G E									
N U M B E R									
WEIGHTED									
PRECIP.									
IN.									
FT <sup>3</sup> /S									
IN.									
DISCHARGE: ACCUM.									
RUNOFF									
DATE & TIME									
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2-D8									
G A G E									
N U M B E R									
WEIGHTED									
PRECIP.									
IN.									
FT <sup>3</sup> /S									
IN.									
DISCHARGE: ACCUM.									
RUNOFF									
DATE & TIME									
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2-D8									
G A G E									
N U M B E R									
WEIGHTED									
PRECIP.									
IN.									
FT <sup>3</sup> /S									
IN.									
DISCHARGE: ACCUM.									
RUNOFF									
DATE & TIME									
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N U M B E R									
WEIGHTED									
PRECIP.									
IN.									
FT <sup>3</sup> /S									
IN.									
DISCHARGE: ACCUM.									
RUNOFF									
DATE & TIME									
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N U M B E R									
WEIGHTED									
PRECIP.									
IN.									
FT <sup>3</sup> /S									
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DISCHARGE: ACCUM.									
RUNOFF									
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N U M B E R									
WEIGHTED									
PRECIP.									
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FT <sup>3</sup> /S									
IN.									
DISCHARGE: ACCUM.									
RUNOFF									
DATE & TIME									
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2-D8									
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N U M B E R									
WEIGHTED									
PRECIP.									
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FT <sup>3</sup> /S									
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DISCHARGE: ACCUM.									
RUNOFF									
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N U M B E R									
WEIGHTED									
PRECIP.									
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FT <sup>3</sup> /S									
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DISCHARGE: ACCUM.									
RUNOFF									
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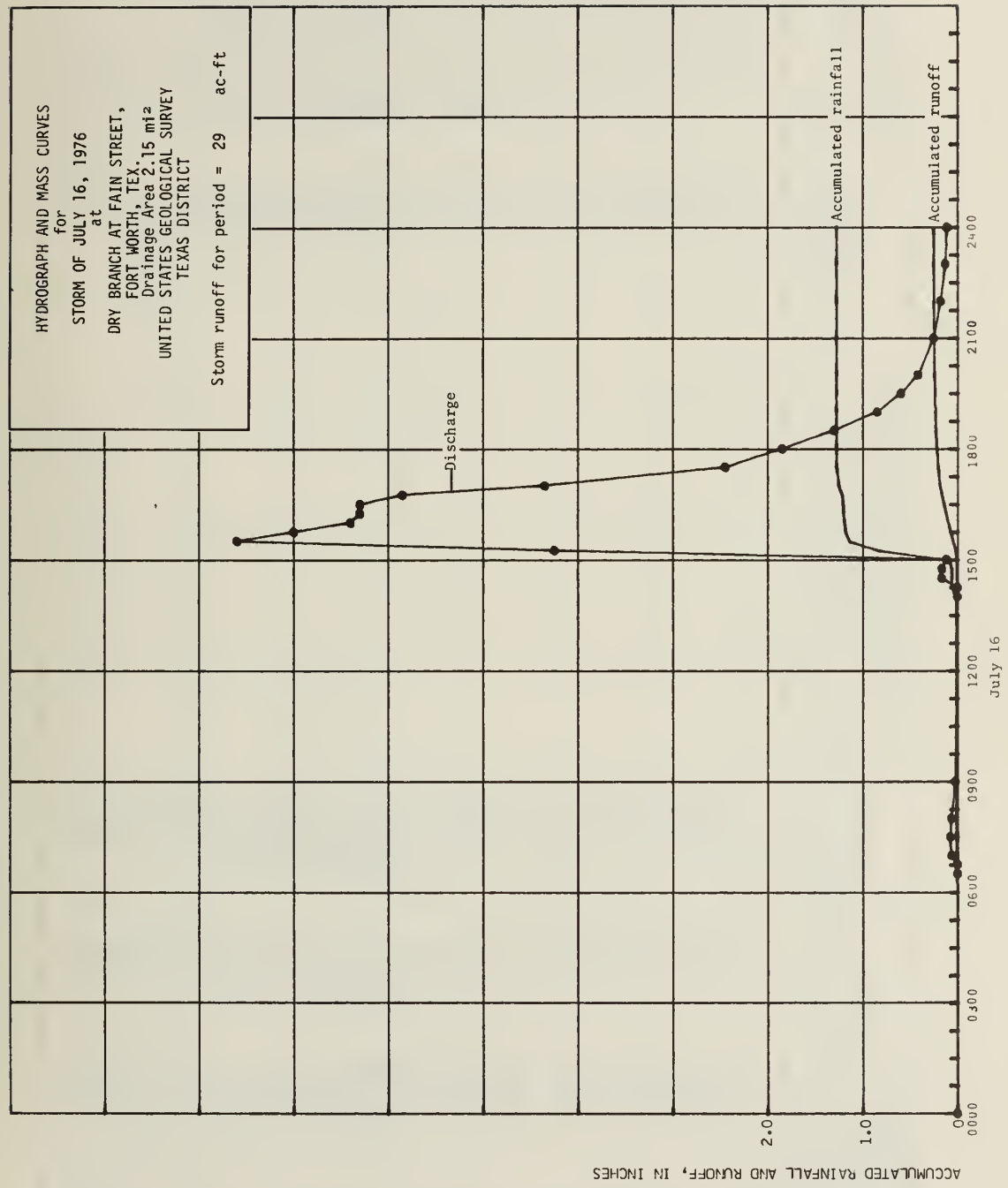






STA. NO. 08048600		STORM RAINFALL AND RUNOFF RECORD										1976 WATER YEAR			
DRY BRANCH AT FAIR STREET, FORT WORTH, TEX.		STORM OF JULY 16, 1976										DISCHARGE: ACCUM.			
		G A G E N U M B E R										IN/ RUNOFF			
DATE & TIME		1-D8	2-D8									PRECIP.	IN.	FT <sup>3</sup> /S	IN.
JULY 16															
0000		0.0	0.0									0.0		0.1	0.0002
0530		0.0	0.0									0.0		0.1	0.0005
0645		0.0	0.04									0.02		0.1	0.0005
0700		0.0	0.04									0.02		1.3	0.0008
0730		0.0	0.04									0.02		0.0014	1.6
0800		0.0	0.04									0.02		1.4	0.0022
0900		0.0	0.04									0.02		0.6	0.0035
1400		0.0	0.04									0.02		0.1	0.0037
1415		0.0	0.12									0.06		0.1	0.0037
1430		0.0	0.12									0.06		3.4	0.0043
1445		0.0	0.12									0.06		0.0049	3.4
1500		0.02	0.16									0.09		2.4	0.0053
1515		0.60	1.04									0.82		85.0	0.0207
1530		1.07	1.21									1.14		152.0	0.0480
1545		1.12	1.24									1.18		140.0	0.0733
1600		1.13	1.25									1.19		128.0	0.0963
1615		1.14	1.26									1.20		126.0	0.1190
1630		1.15	1.26									1.20		126.0	0.1417
1645		1.16	1.26									1.21		117.0	0.1628
1700		1.20	1.30									1.25		87.0	0.1863
1730		1.24	1.31									1.27		49.0	0.2040
1800		1.24	1.31									1.27		37.0	0.2173
1830		1.24	1.31									1.27		26.0	0.2267
1900		1.24	1.31									1.27		17.0	0.2328
1930		1.24	1.31									1.27		12.0	0.2371
2000		1.24	1.31									1.27		8.4	0.2417
2100		1.24	1.31									1.27		5.1	0.2454
2200		1.24	1.31									1.27		3.6	0.2480
2300		1.24	1.31									1.27		2.6	0.2498
2400		1.24	1.31									1.27		2.2	0.2506

DISCHARGE, IN CUBIC FEET PER SECOND



STORM RAINFALL AND RUNOFF RECORD									
1976 WATER YEAR									
STATION NO. 080-8850									
LITTLE FOSSIL CREEK AT MESQUITE STREET, FORT WORTH, TEX.									
STORM OF MAY 30-31, 1976									
DATE & TIME	G A G E N U M B E R				ACCUM.		DISCHARGE: ACCUM.		
	1-LF	2-LF	3-LF		WEIGHTED	PRECIP.	IN	FT <sup>3</sup> /S	IN.
MAY 30									
0000	0.0	0.0	0.0			0.0		0.4	0.0005
2130	0.0	0.0	0.0			0.0		0.3	0.0010
2145	0.04	0.05	0.06			0.05		0.3	0.0010
2200	0.62	0.54	0.50			0.55		0.4	0.0010
2215	0.94	0.69	0.88			0.90		14.0	0.0014
2230	1.14	1.03	1.02			1.06		16.0	0.0019
2245	1.45	1.38	1.38			1.40		14.0	0.0024
2300	1.85	1.75	1.85			1.81		26.0	0.0032
2315	1.89	1.95	2.02			1.96		39.0	0.0044
2330	1.89	1.96	2.03			1.96		53.0	0.0061
2345	2.35	2.44	2.45			2.41		157.0	0.0110
2400	2.54	2.70	2.65			2.63		317.0	0.0185
MAY 31									
0000	2.54	2.70	2.65			2.63		317.0	0.0185
0015	2.54	2.71	2.75			2.67		502.0	0.0368
0030	2.54	2.71	2.77			2.68		587.0	0.0553
0045	2.55	2.71	2.77			2.68		609.0	0.0745
0100	2.55	2.71	2.77			2.68		623.0	0.0941
0115	2.55	2.71	2.77			2.68		587.0	0.1126
0130	2.55	2.71	2.77			2.68		560.0	0.1391
0200	2.55	2.71	2.77			2.68		528.0	0.1640
0215	2.55	2.71	2.77			2.68		491.0	0.1795
0230	2.55	2.71	2.77			2.68		455.0	0.1938
0245	2.60	2.74	2.80			2.72		432.0	0.2074
0300	2.95	3.00	3.17			3.05		414.0	0.2204
0315	3.06	3.15	3.29			3.18		447.0	0.2345
0330	3.11	3.22	3.34			3.23		477.0	0.2495
0345	3.11	3.23	3.35			3.24		470.0	0.2643
0400	3.11	3.23	3.35			3.24		491.0	0.2798
0415	3.12	3.23	3.35			3.24		513.0	0.3040
0445	3.14	3.24	3.38			3.26		475.0	0.3340
0515	3.14	3.24	3.38			3.26		423.0	0.3606
0545	3.16	3.25	3.38			3.27		447.0	0.3958
0630	3.16	3.25	3.38			3.27		376.0	0.4254
0700	3.16	3.25	3.38			3.27		359.0	0.4480
0730	3.16	3.25	3.38			3.27		290.0	0.4663
0800	3.16	3.25	3.38			3.27		245.0	0.4894
0900	3.16	3.25	3.38			3.27		187.0	0.5130
1000	3.16	3.25	3.38			3.27		168.0	0.5342
1100	3.16	3.25	3.38			3.27		144.0	0.5614

STORM RAINFALL AND RUNOFF RECORD									
1976 WATER YEAR									
DISCHARGE: ACCUM.									
IN									
PRECIP.									
IN.									
FT <sup>3</sup> /S									
IN.									
STORM OF MAY 30-31, 1976									
G A G E N U M B E R									
1-LF : 2-LF : 3-LF									
DATE & TIME									
MAY 31									
1300	3.16	3.25	3.38					3.27	100.0
1500	3.16	3.25	3.38					3.27	65.0
1800	3.16	3.25	3.38					3.27	43.0
2400	3.16	3.25	3.38					3.27	23.0
JUNE 1									
0000	3.16	3.25	3.38					3.27	23.0
0600	3.16	3.25	3.38					3.27	16.0
1200	3.16	3.25	3.38					3.27	15.0
1800	3.16	3.25	3.38					3.27	10.0
2400	3.16	3.25	3.38					3.27	8.0

DISCHARGE, IN CUBIC FEET PER SECOND

1,000

900

800

700

600

500

400

300

200

100

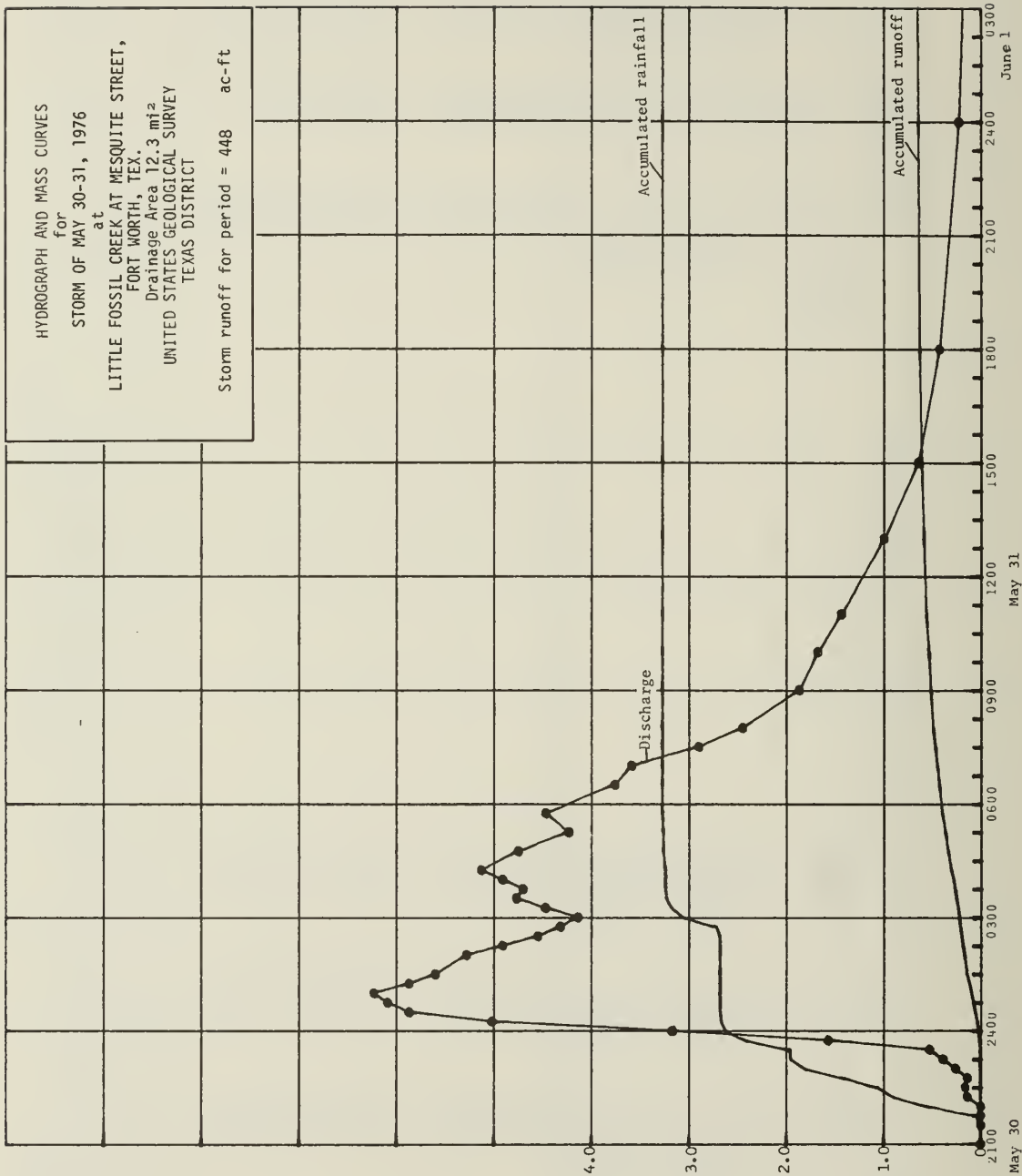
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ACCUMULATED RAINFALL AND RUNOFF, IN INCHES

May 30

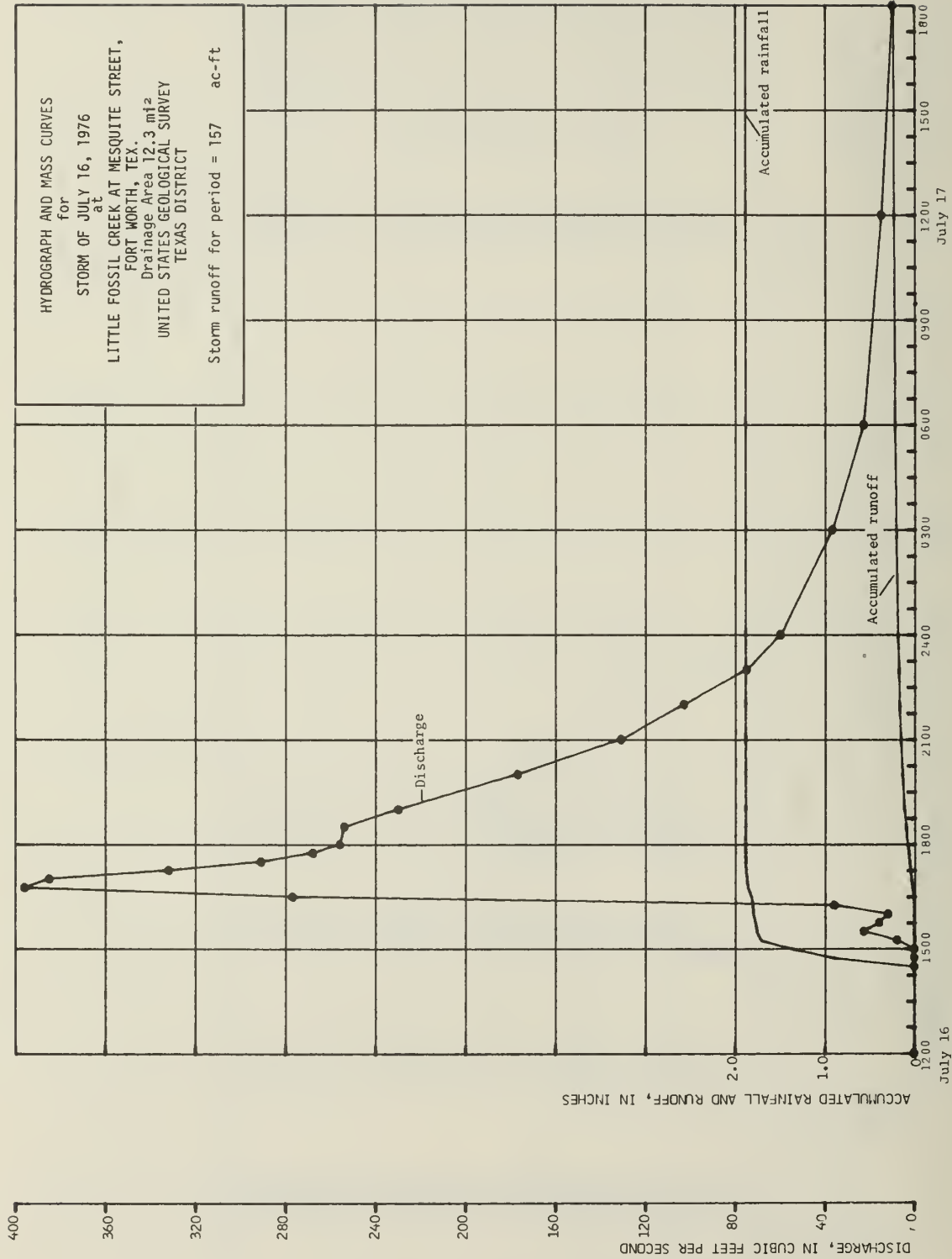
May 31

June 1





STORM RAINFALL AND RUNOFF RECORD									
1976 WATER YEAR									
STA. NO.	CRFEC AT MESQUITE STREET, FORT WORTH, TEX.	STORM OF JULY 16, 1976	ACCUM. : DISCHARGE: ACCUM.	WEIGHTED : IN : RUNOFF	PRECIP. : FT <sup>3</sup> /S : IN.				
DATE & TIME	1-LF	2-LF	3-LF	1-LF	2-LF	3-LF	1-LF	2-LF	3-LF
JULY 16									
0000	0.0	0.0	0.0				0.0		0.4
1430	0.0	0.0	0.0				0.0		0.3
1445	0.50	1.74	0.71				0.90		0.0007
1500	0.73	2.32	1.25				1.34		0.0007
1515	1.21	2.83	1.45				1.71		0.0009
1530	1.25	2.88	1.50				1.76		0.0016
1545	1.28	2.90	1.50				1.80		0.0021
1600	1.33	2.91	1.51				1.80		0.0025
1615	1.34	2.92	1.51				1.80		0.0037
1630	1.35	2.92	1.54				1.82		0.0124
1645	1.37	2.96	1.59				1.86		0.0249
1700	1.39	2.98	1.60				1.87		0.0370
1715	1.40	2.99	1.60				1.88		0.0474
1730	1.41	2.99	1.60				1.88		0.0566
1745	1.42	2.99	1.60				1.89		0.0650
1800	1.42	2.99	1.60				1.89		0.0771
1830	1.42	2.99	1.60				1.89		0.0931
1900	1.42	2.99	1.60				1.89		0.1149
2000	1.42	2.99	1.60				1.89		0.1372
2100	1.42	2.99	1.60				1.89		0.1537
2200	1.42	2.99	1.60				1.89		0.1666
2300	1.42	2.99	1.60				1.89		0.1761
2400	1.42	2.99	1.60				1.89		0.1855
JULY 17									
0000	1.42	2.99	1.60				1.89		0.1855
0300	1.42	2.99	1.60				1.89		0.2052
0600	1.42	2.99	1.60				1.89		0.2182
1200	1.42	2.99	1.60				1.89		0.2296
1800	1.42	2.99	1.60				1.89		0.2371
2400	1.42	2.99	1.60				1.89		0.2398



STORM RAINFALL AND RUNOFF RECORD									
1976 WATER YEAR									
STATION NO. 08048550									
DRY BRANCH AT BLANDIN STREET, FORT WORTH, TEX.									
STORM OF MAY 30-31, 1976									
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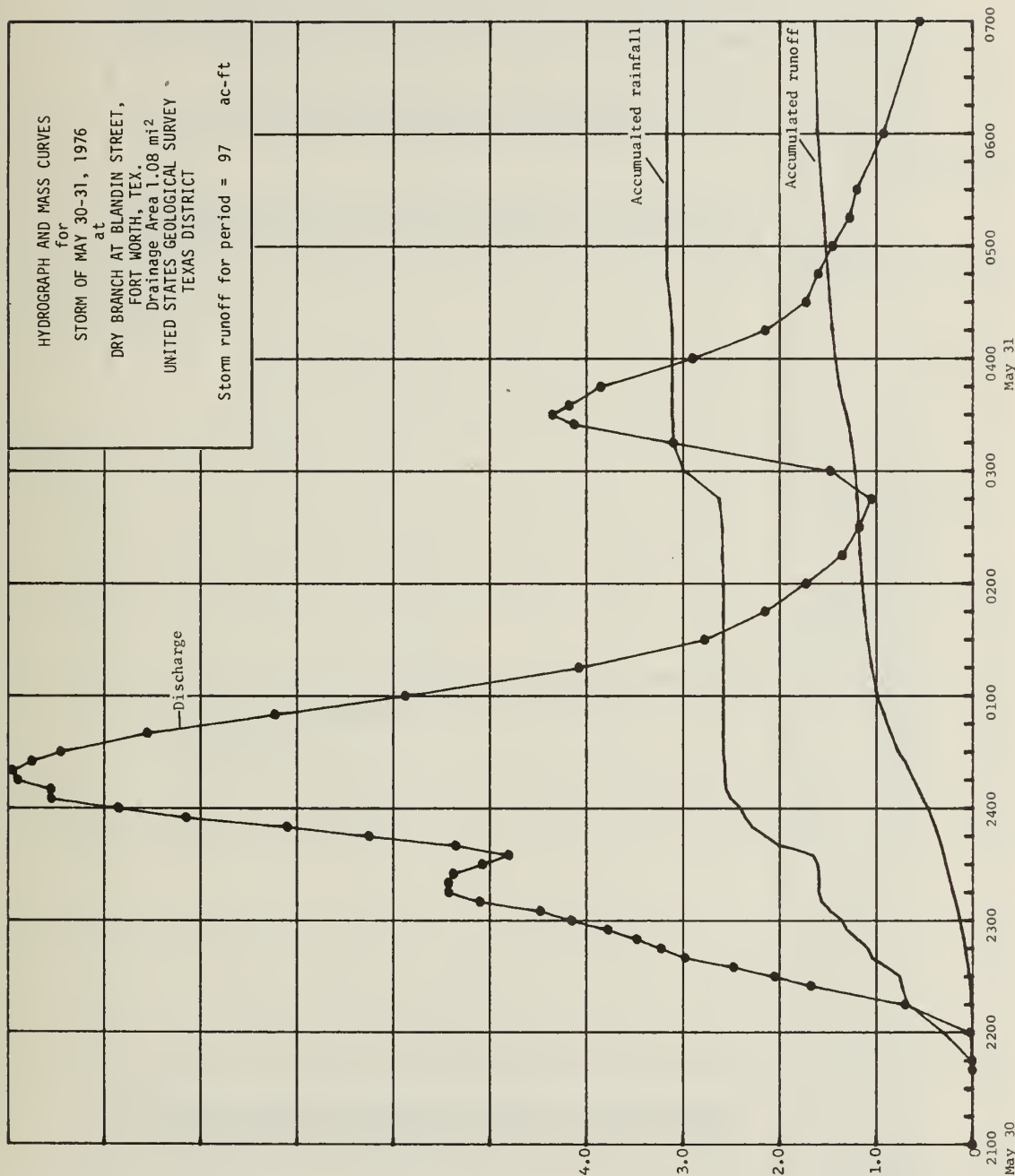
STORM RAINFALL AND RUNOFF RECORD									
1976 WATER YEAR									
STATION NO. 0804850									
DRY BRANCH AT BLANDIN STREET, FORT WORTH, TEX.									
STORM OF MAY 30-31, 1976									
DATE & TIME									
1-DR									
PRECIP. IN.									
WEIGHTED ACCUM. DISCHARGE IN RUNOFF									
FT <sup>3</sup> /S IN. ACCUM. IN. RUNOFF									
MAY 31									
0215	2.59							2.59	54.0
0230	2.59							2.59	47.0
0245	2.62							2.62	42.0
0300	2.99							2.99	59.0
0315	3.10							3.10	124.0
0325	3.10							3.10	124.0
0330	3.11							3.11	165.0
0335	3.11							3.11	174.0
0345	3.11							3.11	167.0
0400	3.11							3.11	154.0
0415	3.11							3.11	116.0
0430	3.13							3.13	86.0
0445	3.17							3.17	69.0
0500	3.17							3.17	64.0
0515	3.17							3.17	58.0
0530	3.17							3.17	51.0
0600	3.17							3.17	48.0
0700	3.17							3.17	37.0
0800	3.17							3.17	22.0
0900	3.17							3.17	12.0
1000	3.17							3.17	6.0
1200	3.17							3.17	3.0
1800	3.17							3.17	1.0
2400	3.17							3.17	0.8
								3.17	0.5
								3.17	1.6862

DISCHARGE, IN CUBIC FEET PER SECOND

400  
360  
320  
280  
240  
200  
160  
120  
80  
40  
0

ACCUMULATED RAINFALL AND RUNOFF, IN INCHES

May 30  
2100  
2200  
2300  
2400  
0100  
0200  
0300  
0400  
0500  
0600  
0700

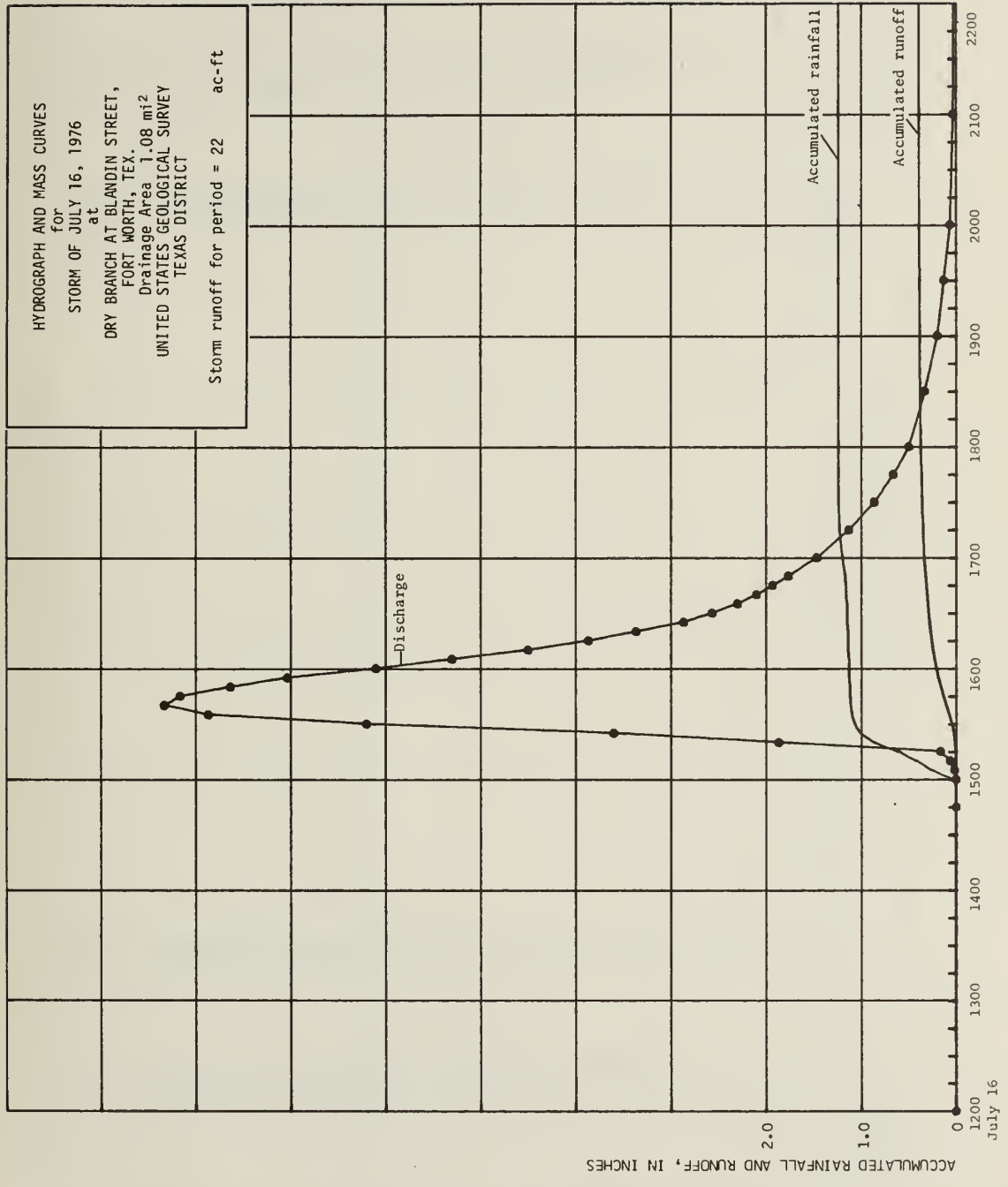


STA. NO. 08048550		STORM RAINFALL AND RUNOFF RECORD									
		DRY BRANCH AT BLANDIN STREET, FORT WORTH, TEX.				STORM OF JULY 16, 1976				1976 WATER YEAR	
DATE & TIME		1-D8		G A G E		N U M B E R		P R E C I P .		D I S C H A R G E	
								IN.		IN.	
								FT./S			



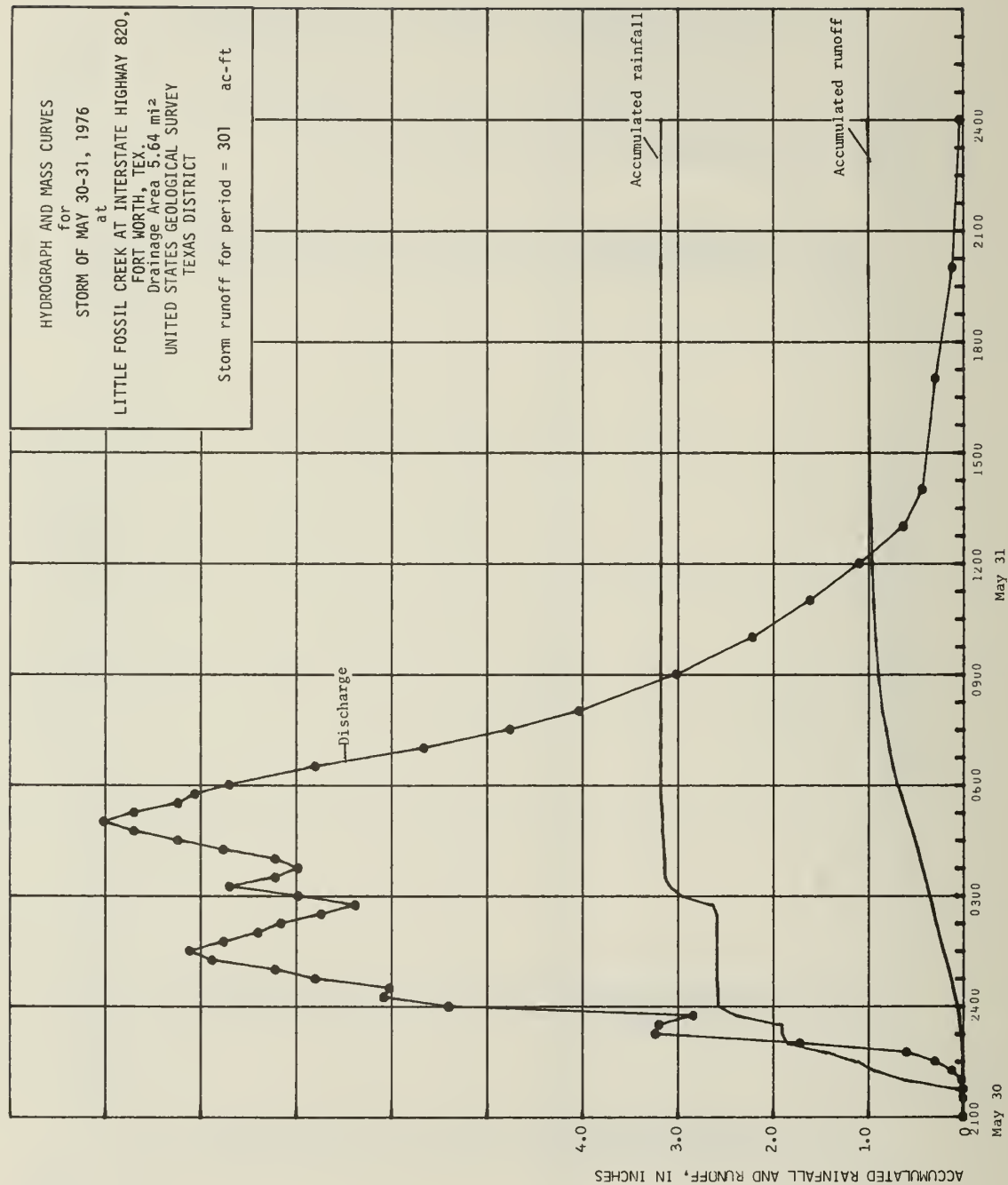
DISCHARGE, IN CUBIC FEET PER SECOND

300  
270  
240  
210  
180  
150  
120  
90  
60  
30  
0

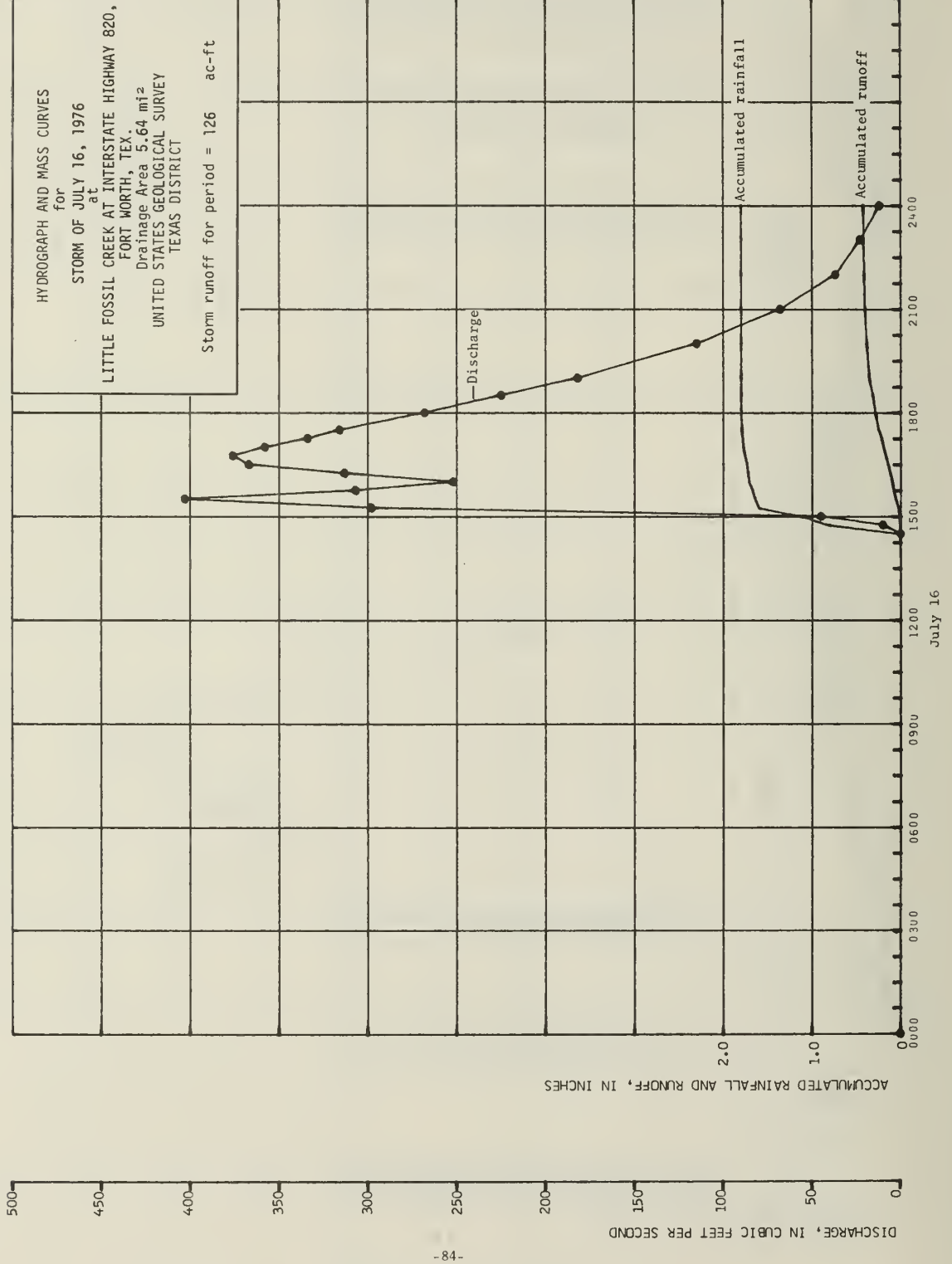


STORM RAINFALL AND RUNOFF RECORD									
1976 WATER YEAR									
STA. NO.	LITTLE FOSSIL CREEK AT INTERSTATE HWY 820, FT WORTH, TEX								
	STORM OF MAY 30-31, 1976								
DATE & TIME	1-LF	2-LF	G A G E	N U M B E R	ACCUM. PRECIP. IN.	WEIGHTED PRECIP. IN.	DISCHARGE IN	ACCUM. RUNOFF IN.	
MAY 30									
0000	0.0	0.0			0.0	0.0	0.2	0.0006	
2130	0.0	0.0			0.0	0.0	0.2	0.0012	
2145	0.04	0.05			0.04	0.04	0.2	0.0012	
2200	0.62	0.54			0.60	1.0	0.0013	0.0013	
2215	0.94	0.89			0.93	0.93	6.0	0.0017	
2230	1.14	1.03			1.11	15.0	15.0	0.0027	
2245	1.45	1.34			1.43	30.0	30.0	0.0048	
2300	1.85	1.85			1.85	86.0	86.0	0.0107	
2315	1.89	1.95			1.90	162.0	162.0	0.0218	
2330	1.89	1.96			1.91	160.0	160.0	0.0328	
2345	2.35	2.44			2.37	142.0	142.0	0.0426	
2400	2.54	2.70			2.58	270.0	270.0	0.0565	
MAY 31									
0000	2.54	2.70			2.58	270.0	270.0	0.0565	
0015	2.54	2.71			2.58	304.0	304.0	0.0820	
0030	2.54	2.71			2.58	301.0	0.1027	0.1027	
0045	2.55	2.71			2.59	340.0	0.1260	0.1260	
0100	2.55	2.71			2.59	361.0	0.1508	0.1508	
0115	2.55	2.71			2.59	394.0	0.1779	0.1779	
0130	2.55	2.71			2.59	406.0	0.2058	0.2058	
0145	2.55	2.71			2.59	388.0	0.2324	0.2324	
0200	2.55	2.71			2.59	370.0	0.2578	0.2578	
0215	2.55	2.71			2.59	358.0	0.2824	0.2824	
0230	2.55	2.71			2.59	337.0	0.3056	0.3056	
0245	2.60	2.74			2.63	319.0	0.3275	0.3275	
0300	2.95	3.00			2.96	349.0	0.3514	0.3514	
0315	3.06	3.15			3.08	385.0	0.3779	0.3779	
0330	3.11	3.22			3.14	361.0	0.4027	0.4027	
0345	3.11	3.23			3.14	349.0	0.4267	0.4267	
0400	3.11	3.23			3.14	361.0	0.4514	0.4514	
0415	3.12	3.23			3.15	388.0	0.4781	0.4781	
0430	3.13	3.23			3.15	412.0	0.5064	0.5064	
0445	3.14	3.24			3.16	435.0	0.5363	0.5363	
0500	3.14	3.24			3.16	451.0	0.5673	0.5673	
0515	3.14	3.24			3.16	435.0	0.5971	0.5971	
0530	3.15	3.24			3.17	412.0	0.6254	0.6254	
0545	3.16	3.25			3.18	403.0	0.6531	0.6531	
0600	3.16	3.25			3.18	385.0	0.6928	0.6928	
0630	3.16	3.25			3.18	340.0	0.7395	0.7395	
0700	3.15	3.25			3.18	283.0	0.7784	0.7784	

STORM RAINFALL AND RUNOFF RECORD									
STA. NO.	1976 WATER YEAR								
08048820									
LITTLE FOSSIL CREEK AT INTERSTATE HWY R20, FT WORTH, TEX STORM OF MAY 30-31, 1976									
DATE & TIME	G A G E		N U M B E R		PRECIP.		DISCHARGE		ACCUM.
	1-LF	2-LF			IN.	FT <sup>3</sup> /S	IN.		
MAY 31									
0730	3.16	3.25			3.18	238.0	0.8111		
0800	3.16	3.25			3.18	202.0	0.8527		
0900	3.16	3.25			3.18	151.0	0.8942		
1000	3.16	3.25			3.18	111.0	0.9247		
1100	3.16	3.25			3.18	81.0	0.9469		
1200	3.16	3.25			3.18	55.0	0.9620		
1300	3.16	3.25			3.18	32.0	0.9708		
1400	3.16	3.25			3.18	22.0	0.9829		
1700	3.16	3.25			3.18	15.0	0.9953		
2000	3.16	3.25			3.18	6.0	1.0010		
2400	3.16	3.25			3.18	2.0	1.0021		



STORM RAINFALL AND RUNOFF RECORD									
STA. NO.	1976 WATER YEAR								
LITTLE FOSSIL CREEK AT INTERSTATE HWY 820, FT WORTH, TEX STORM OF JULY 16, 1976									
DATE & TIME	1-LF	2-LF	G A G E	N U M B E R	PRECIP.	ACCUM.	DISCHARGE:	IN	RUNOFF
					IN.	FT <sup>3</sup> /S			IN.
JULY 16									
0000	0.0	0.0			0.0	0.2		0.0004	
1430	0.0	0.0			0.0	0.2		0.0008	
1445	0.50	1.74			0.80	10.0		0.0015	
1500	0.73	2.32			1.11	45.0		0.0046	
1515	1.21	2.83			1.60	298.0		0.0251	
1530	1.25	2.88			1.64	403.0		0.0527	
1545	1.28	2.90			1.67	307.0		0.0738	
1600	1.33	2.91			1.71	252.0		0.0911	
1615	1.34	2.92			1.72	313.0		0.1126	
1630	1.35	2.92			1.73	367.0		0.1378	
1645	1.37	2.96			1.75	376.0		0.1637	
1700	1.39	2.98			1.77	358.0		0.1883	
1715	1.40	2.99			1.78	334.0		0.2112	
1730	1.41	2.99			1.79	316.0		0.2438	
1800	1.42	2.99			1.80	268.0		0.2806	
1830	1.42	2.99			1.80	225.0		0.3115	
1900	1.42	2.99			1.80	182.0		0.3490	
2000	1.42	2.99			1.80	115.0		0.3806	
2100	1.42	2.99			1.80	68.0		0.3993	
2200	1.42	2.99			1.80	37.0		0.4094	
2300	1.42	2.99			1.80	23.0		0.4157	
2400	1.42	2.99			1.80	12.0		0.4174	











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